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SHIFT-SHARE ANALYSIS OF YUGOSLAV ECONOMY
BETWEEN 1952 AND 1990



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SELECTED WORKS / ИЗАБРАНА ДЕЛА

1.

EFFICIENCY AND JUSTICE: POLITICAL ECONOMICS OF YUGOSLAVIA

2.

SHIFT-SHARE ANALYSIS OF YUGOSLAV ECONOMY, 1952–1990

3.

REGIONAL PROBLEM AND THE BREAK-UP OF YUGOSLAVIA

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12.

БЕСЕДЕ / РАЗГОВОРИ

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EXLIBRISTICA

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БИБЛИОГРАФИЈА И КОМЕНТАРИ (1970 –2025)
ПРИКАЗИ И ОСВРТИ (1972 –2025)

Časlav Očić

SHIFT-SHARE ANALYSIS
OF
YUGOSLAV ECONOMY
BETWEEN 1952 AND 1990



АРХИВ ВОЈВОДИНЕ

ARHIV VOJVODINE

In memory of

*Đorđe Šuvaković (July 13, 1951 – January 14, 2006),
a friend*

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ABBREVIATIONS

REPUBLICS AND PROVINCES

YUG = Yugoslavia	CES = Central Serbia
BIH = Bosnia and Herzegovina	KIM = Kosovo and Metohia
MNO = Montenegro	VOJ = Vojvodina
CRO = Croatia	R = Republic
MAK = Macedonia	P = Province
SLO = Slovenia	FED = Federation
SRB = Serbia	

MAIN SECTORS (FIELDS) OF ACTIVITIES

AGR = Agriculture	TRD = Trade
AGR+ = Agriculture (+ Water Management)	TOU = Catering and tourism
WAT = Water management	HSN = Housing and communal activities
FOR = Forestry	FIN = Financial services
MAN = Manufacturing and mining	EDU = Education and culture
CON = Construction	HEA = Health and social protection
ART = Artisanhip	SPC = Social and political communities and organizations
TRC = Transport and communication	

OTHER

EMP = Employment	OTH = Other
FAS = Fixed assets	RSA = Regional Science Association
FNP = (Federal) Fund for underdeveloped regions	SHISHA = Shift-Share Analysis
GDP = Gross domestic product	TOT = Total
	UNA = Unallocated

Part One

EMPLOYMENT, FIXED ASSETS,
GROSS DOMESTIC PRODUCT:
THE DECOMPOSITION OF REGIONAL
STRUCTURAL CHANGES

Chapter A

SHIFT-SHARE ANALYSIS

This study analyzes the relationship between regional growth and sectoral structures. Different techniques of shift-share analysis (SHISHA) are used to test this relationship. In the standard version¹ of the analysis, regional (economic) growth,

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- ¹ It is believed that the standard shift-share analysis is based on Creamer's research of locational shifts in the manufacturing from 1942. (Daniel Creamer, Shifts in the Manufacturing Industries, in: *Industrial Location and Natural Resources*, National Resources Planning Board, U.S.A., December 1942). In the early 1960s, the technique was further developed and used as an analytical means by Zelinsky, Fuchs, Ashby, Dunn, Perloff, Lampard, Muth... (See, for example, Wilbur Zelinsky, A Method for Measuring Change in the Distribution of Manufacturing Activity: The United States, 1939-49, *Economic Geography*, April 1958; Victor R. Fuchs, Changes in U.S. Manufacturing Since 1929, *Journal of Regional Science*, Spring 1959, pp. 11-17; H. S. Perloff, E. S. Dunn, E. E. Lampard & R. E. Muth, *Regions, Resources and Economic Growth*, John Hopkins P., Baltimore, 1960; Edgar S. Dunn, *Recent Southern Economic Development*, University of Florida P. Gainesville, 1962; Lowell D. Ashby, The Geographical Redistribution of Employment: An Examination of the Elements of Change, *Survey of Current Business*, 1963, pp. 13-20; Lowell D. Ashby, *Growth Patterns in Employment by County 1940-50 and 1950-60*, Vols. I-VIII, U.S. Government Printing Office, Washington D.C., 1965). Houston attempted to critically review the actual and supposed deficiencies of this technique, but Ashby refuted his critique with convincing arguments (See: David B. Houston, The Shift and Share Analysis of Regional Growth: A Critique, *Southern Economic Journal*, Vol. 33, 3, 1966, pp. 577-581, and Lowell D. Ashby, The Shift and Share Analysis: A Reply, *Southern Economic Journal*, Vol. 34, 3, 1967, pp. 423-425). Mackay called attention to the problem of interpreting the results of this analysis due to the interdependence of various sectors (D. I. Mackay, Industrial Structure and Regional Growth: A Methodological Problem, *Scottish Journal of Political Economy*, June 1968, pp. 129-143). Brown uses this analysis as a means for regional growth projections (See: H. J. Brown, Shift and Share Projections of Regional Economic Growth: An Empirical Test, *Journal of Regional Science*, Vol. 9, 1, 1969, pp. 11-18), whereas Hellman tests its properties as a predictive tool (See: D. A. Hellman, Shift-Share Models as Predictive Tools, *Growth and Change*, 7, 1979, pp. 3-8). Buck sees shift-share analysis results as a basis for pursuing a regional policy (T. W. Buck, Shift Share Analysis - A Guide to Regional Policy, *Regional Studies*, 4, 1970, pp. 445-450), whereas Todd and Brierley apply it in examining demographic change (D. Todd & J. S. Brierley, The Shift Technique: An Exercise in Descriptive Versatility, *Area*, Vol. 9, 4, 1977, pp. 297-302). In addition to testing this technique's various possible applications, a concomitant debate arose about certain methodological issues, i.e. possibilities for its improvement (F. J. B. Stillwell, Further Thoughts on the Shift and Share Approach, *Regional Studies*, 4, 1970, pp. 451-458; C.C. Paraskevopoulos, The Stability of the Regional Share Component: An Empirical Test, *Journal of Regional Sciences*, 11, 1971, pp. 107-112; H. J. Brown, The Stability of the Regional Share Component: A Reply, *Journal of Regional Sciences*, Vol. 11, 1, 1971, pp. 113-114; T. A. Klaasen & J. H. P. Paelink, Asymmetry in Shift and Share Analysis, *Regional and Urban Economics*, 2, 1972, pp. 256-261; Korhan Berzeg, The Empirical Content of Shift-Share Analysis, *Journal of Regional Sciences*, Vol. 18, 3 1978, pp. 463-469; Andreas A. Andrikopoulos, A Synthesis of the Production Function and the Shift-Share Model, *Regional Science and Urban Economics*, 10, 4, November 1980, pp. 539-560). Among some newer case studies in which various improved versions of this technique have been applied are as follows: T. A. Klaasen, Regional Comparative Advantage in the United States, *Journal of Regional Sciences*, 13, 1973, pp. 97-105; regional Economic Analysis Division, U.S. Department of Commerce, The BEA Economic Areas: Structural Change and Growth, 1950-73, *Survey of Current Business*, 55, 1975, pp. 14-25; J. A. Edwards, Industrial Structure and Regional Change: A Shift-Share Analysis of the British Columbian

expressed through various indicators such as: gross domestic product, employment, and fixed assets (capital), is broken down into three segments:

proportional (relative) *hypothetical growth*,
structural, and
differential (regional) *shift*.

In view of the fact that the subject matter concerns the clarification of segments which constitute real regional growth or decline – in a word, *change – shift-share analysis may be regarded as an analysis of shifts and shares components of regional change*.

The selected indicator (*employment, fixed assets or GDP*) may grow in certain sectors (or regions) more quickly than in others². Dunn is of the view that SHISHA “facilitates factor result determination” on the following levels:

- (a) Acting more or less uniformly on the national scale, although they may have a variable influence on individual regions, and
- (b) Such as may act more or less specifically in individual regions³.

Let us assume that

x_{ij} – represents the value of the indicator for sector i in region j .

$X_j = \sum_i x_{ij}$ – represents the sum of value indicators by sector in region j , i.e. the value of indicators at the level of region j .

$X_i = \sum_j x_{ij}$ – sum of value indicators of sector i by region, i.e. value of indicators for sector i at the level of Yugoslavia.

$X = \sum_i \sum_j x_{ij}$ – sum of value indicators by sector and by region, i. e. the value of indicators at the level of Yugoslavia.

Using the aforementioned symbols, and noting that the superscript o , or t , refers to the value of indicators in the initial or terminal year, SHISHA values may be depicted in algebraic form as follows:

$$F_j = X_j^t - X_j^o$$

$$P_j = \sum_i p_{ij} = \sum_i (x_{ij}^0 X^t / X^o - x_{ij}^t)$$

Economy, 1961–1970, *Regional Studies*, 10, 1976, pp. 307–317; Andreas A. Andrikopoulos, Industrial Structure and Regional Change: The Case of the Greek Economy, 1963–1969, *The Greek Review of Social Research*, Vol. 9, 32, January–April 1978, pp. 106–117).

2 Perloff puts it in this way: “The structural effect raises the question: why employment in some sectors of the national economy grows faster than in others? The effect of the regional factor raises another question: why employment in the same sectors grows faster in some regions than in others?” (H. S. Perloff, *How a Region Grows*, Supplementary Paper No. 17, Committee for Economic Development, New York 1963).

3 Edgar S. Dunn Jr., A Statistical and Analytical Technique for Regional Analysis, *The RSA Papers and Proceedings*, Vol. VI, 1960, p. 97.

$$\begin{aligned}
S_j &= \Sigma_i s_{ij} = \Sigma_i x_{ij}^0 \left(X_i^t / X_i^0 - X^t / X^0 \right) \\
D_j &= \Sigma_i d_{ij} = \Sigma_i \left(x_{ij}^t - x_{ij}^0 X_i^t / X_i^0 \right) \\
D_j' &= \Sigma_i d_{ij}' = \Sigma_i \left[\left(x_{ij}^t / x_{ij}^0 - X_i^t / X_i^0 \right) X_j^0 X_i^0 / X^0 \right] \\
D_j'' &= \Sigma_i d_{ij}'' = \Sigma_i \left[\left(x_{ij}^t / x_{ij}^0 - X_i^t / X_i^0 \right) X_j^0 \left(x_{ij}^0 / X_j^0 - X_i^0 / X^0 \right) \right] \\
D_j &= D_j' + D_j'' \\
F_j &= P_j + S_j + D_j
\end{aligned}$$

Whereby,

F_j – stands for real change in the value of an indicator;

P_j – is the proportionate regional share representing the hypothetical change of value of indicators in the region, assuming that the value of an indicator in the region in period t grew or declined relative to the base period, in conformity with the average Yugoslav rate.

S_j – stands for structural shift and reflects a partial change in the value of an indicator resulting from sectoral structures and suggests whether or not, from the standpoint of the selected indicator, the sectoral structure of the region is favorable (significant presence of sectors with above average growth rates) or unfavorable (the predominant presence of sectors with below average growth). The proportional shift is positive for regions where sectors with high growth rates at the general, or Yugoslav, level may be noted, and is negative for regions which are characterized by stagnant or declining sectors.

D_j – the differential shift represents a partial change in the value of indicators resulting from the difference in an increase in the value of indicators in the region and the same indicator on the national level. The differential shift is positive in regions where sectors exhibit a faster growth rate than on the national level, while in the opposite case the differential shift is negative. This kind of shift is caused by a region's various specific characteristics and consists of the net differential shift and allocation effect⁴.

D_j' – the net differential shift reflects the discrete influence of the competitive position of the region which is obtained by eliminating the influence of the specific features of a region's structure, such that the real value of the indicator is substituted by the homothetic, which the region might have achieved had it had the Yugoslav sectoral structure.

4 Inspired by Esteban-Marquillas' reinterpretation of shift-share analysis, Herzog and Olsen broke down the differential effect in this way (See: J. M. Esteban-Marquillas, A Reinterpretation of Shift-Share Analysis, *Regional and Urban Economics*, 2, 1972, pp. 249–255; Henry W. Herzog Jr. & Richard J. Olsen, Shift-Share Analysis Revisited: The Allocation Effect and Stability of Regional Structure, *Journal of Regional Sciences*, 17, 3, 1977, pp. 441–454).

D_j'' – Allocation effect shows whether the region is specialized, i.e the value of the indicators allocated to sectors with above average or below average growth, with (or without) competitive advantages. The defining characteristic of the allocation effect depends on the characteristics of the following two factors: the difference in regional and Yugoslav share of sectors with the aggregate value of indicators ($x_{ij}^0 / X_j^0 - X_i^0 / X^0$) and the differences in growth coefficients of regional sectors and sectors at the Yugoslav level ($x_{ij}^t / x_{ij}^0 - X_i^t / X_i^0$). The four possible combinations of regional specialization and comparative advantages are represented in table 1.1.

Table 1.1 TYPES OF ALLOCATION EFFECT

Type	Description	Components		
		D_{ij}''	Specialization	Comparative advantages
			$(x_{ij}^0 / X_j^0 - X_i^0 / X^0)$	$(x_{ij}^t / x_{ij}^0 - X_i^t / X_i^0)$
1	Comparatively poor, specialized	-	+	-
2	Comparatively poor, unspecialized	+	-	-
3	Comparatively good, non-specialized	-	-	+
4	Comparatively good, specialized	+	+	+

The sector characterized by the *Type 4 allocation effect* has comparative advantages as the region within it is specialized, which is the best option. As opposed to that, *Type 1 marks the worst situation* – a region specialized in the sector with no comparative advantages.

The sum of structural and differential shifts indicates a drop ($S_j + D_j > 0$) or increase ($S_j + D_j < 0$) in its proportional share (P_j) and whether the region is growing more rapidly ($F_j > P_j$) or more slowly ($F_j < P_j$) relative to the global average.

Depending on the plus or minus sign, magnitude, the sum effect and the relationship between the structural and differential shifts, there are eight types of regions, as shown in Table 1.2⁵.

Type 1, 2, 3, and 4 regions have above average growth rates. In addition, Type 1 and 2 regions owe this rate of growth to favorable sectoral structure and a positive differential shift. In the former case, the sectoral structure of the region is the more significant component, while in the latter it is the differential component. The above average growth of a Type 3 region is the result of good sectoral structure whose

⁵ This table is an elaborated Boudeville's four-component classification of regions. (See: J. R. Boudeville, *Problems of Regional Economic Planning*, Edinburgh U. P., Edinburgh, 1966, pp. 77–80; E. J. B. Stillwell, *Regional Growth and Structural Adaptation: A Comment*, *Urban Studies*, Vol. 6, 2. 1969, p. 170; I. D. Ashby, *Changes in Regional Industrial Structure: A Comment*, *Urban Studies*, Vol. 7. 3. 1970, p. 299).

Table 1.2 TYPES OF REGIONS ACCORDING TO SIGN AND MAGNITUDE OF STRUCTURAL AND DIFFERENTIAL SHIFTS

Type	S_j	D_j	$S_j + D_j$
1	+	+	$+, S_j > D_j$
2	+	+	$+, S_j < D_j$
3	+	-	+
4	-	+	+
5	-	+	-
6	+	-	-
7	-	-	$-, S_j > D_j$
8	-	-	$-, S_j < D_j$

positive impact exceeds the negative differential shift. Type 4 regions owe their accelerated growth to the fact that the positive differential shift exceeds the negative effects of sectoral structure.

Type 5, 6, 7, and 8 regions have a slower than average growth rate. The reasons for their slower growth are varied. While the slower growth of region 5 is due to a relatively unfavorable sectoral structure, in region 6 slow growth is the result of a negative differential shift. The slower growth of the Type 7 and 8 regions is the consequence of the cumulative negative effect of the structural and differential components, where, in the former case, the effect of structure is the more deleterious, while in the latter it is the impact of factors which determine the differential shift.

In the application of a shift-share analysis two general calculation problems are also encountered:

the problem of aggregation, and

the issue of the influence of the base year.

The problem of aggregation (which is inherent to every technique that is sensitive to data change) is resolved here bearing in mind the basic goal of this research project: analyzing structural changes in regions from 1952-1990. A high degree of disaggregation with a large quantity of data makes the results unintelligible and more difficult to identify regularities in sectoral structure changes by region. In other words, in this instance it turns out that there is *a relative surplus of data which blurs the image of long term structural changes*. A high degree of aggregation (primary, secondary, and tertiary sectors) provides a rough insight into long-term tendencies, but says nothing about changes inside national sectors which are significant from the standpoint of *identifying growth stimulating factors*. It is for that reason that in this research project a shift-share analysis is applied to *sectors*

(“fields”) of activity (oblasti delatnosti⁶). This level of aggregation is high enough for long term regularities to be visible and low enough to enable the identification of specific sectoral changes.

In its standard form the analysis is an expression of the structural shift in relation to the base year. In other words, all *ponders* (weights) used in the equations from (1.1) to (1.8) refer to the sectoral structure at the beginning of the selected period⁷. As for this issue, the analysis can be modified in such a way that, rather than the ponder from the base year, ponders from the final year are used, or a linear combination of ponders from the base and final years is substituted for base year ponders in the following way:

$$\lambda_1 x_{ij}^0 + \lambda_2 x_{ij}^t, \lambda_1 + \lambda_2 = 1 \quad (1.9)$$

It should be kept in mind that the selection of the ponder either from the base or the final year may be viewed as a special case of a linear combination, wherein $\lambda_2 = 0$ (or $\lambda_1 = 0$). Fuchs⁸, for example, proposes solving this question by using a calculation consisting of average results obtained from using ponders from the base and final years (which, for all practical purposes, comes down to $\lambda_1 = \lambda_2 = 0.5$), while Dan⁹ contemplates “developing some sort of time dependent integral.”

The key “technical” deficiency of the proposed solutions is that, when applied, the main characteristic of the shift-share analysis is lost, i.e. the standardization of growth components. That is to say, when by following one of these methods the

6 According to the Yugoslav (unique) classification of activities (*Jedinstvena klasifikacija delatnosti*) MAIN SECTORS OF ACTIVITIES (oblasti delatnosti / области делатности) from 1952 to 1990 were: AGRICULTURE (poljoprivreda / пољопривреда – пољ), WATER MANAGEMENT (vodoprivreda / водопривреда – вод), FORESTRY (šumarstvo / шумарство – шум), MANUFACTURING AND MINING (industrija i rudarstvo / индустрија и рударство – инд), CONSTRUCTION (gradevinarstvo / грађевинарство – гра), ARTISANSHIP (zanatstvo / занатство – зан), TRANSPORT AND COMMUNICATION (saobraćaj i veze / саобраћај и везе – сао), TRADE (trgovina / трговина – трг), CATERING AND TOURISM (ugostiteljstvo i turizam / угоститељство и туризам – уго), HOUSING AND COMMUNAL ACTIVITIES (stambeno-komunalna delatnost / стамбено-комунална делатност – стк), FINANCIAL SERVICES (finansijske usluge / финансијске услуге – фин), EDUCATION AND CULTURE (obrazovanje i kultura / образовање и култура – оик), HEALTH AND SOCIAL PROTECTION (zdravstvo i socijalna zaštita / здравство и социјална заштита – зис), and SOCIO-POLITICAL COMMUNITIES AND ORGANIZATIONS (društveno-političke zajednice i organizacije / друштвено-политичке заједнице и организације – дпз). See ABBREVIATIONS on p. XVII.

7 This problem was the subject of a sharp and productive dispute in the *Urban Studies* journal that lasted from 1969 to 1978: F. J. B. Stillwell, Regional Growth and Structural Adaptation, *Urban Studies*, Vol. 6, 2, 1969, pp. 162-178; Lowell D. Ashby, Changes in regional Industrial Structure: A Comment, *Urban Studies*, Vol. 7, 3, 1970, pp. 298-304; James A. Chalmers, Measuring Changes in Regional Industrial Structure: A Comment on Stillwell and Ashby, *Urban Studies*, Vol. 8, 3, 1971, pp. 289-292; J. Arwel Edwards, K. F. Harriman & J. S. Morgan, Regional Growth and Structural Adaptation: A Correction to the Stillwell Modification, *Urban Studies*, Vol. 15, 1, 1978, pp. 97-100.

8 Victor R. Fuchs, *Changes in the Location of Manufacturing in the United States Since 1929*, Economic Census Studies 1, Yale U. P., New Haven & London, 1962.

9 Edgar S. Dunn Jr., A Statistical and Analytical Technique for Regional Analysis, *The RSA Papers and Proceedings*, Vol. VI, 1960, pp. 97-112.

analysis is modified, the net shift cannot be obtained by adding up the structural and differential shift¹⁰. In addition to this deficiency, the proposed analysis modifications also have a disadvantage, which, from the standpoint of interpreting results is fundamental: the result obtained by a linear ponder combination in which the coefficients vary from 0 to 1 is artificial, while the coefficients are necessarily arbitrarily defined.

The majority of authors, therefore, suggest that the best solution is breaking up the analysis period into *sub-periods*, especially when the period is lengthy. Thus, for instance, Thirlwall concludes that the only correct solution to this problem is the division of the selected period into sub-periods¹¹.

In this study the 1952–1990 period is subdivided into seven sub-periods: 1952–1960, 1960–1965, 1965–1970, 1970–1975, 1975–1979, 1979–1983, 1983–1990. When dividing into sub-periods care was taken to ensure their relative institutional homogeneity, on the one hand, and to identify the decisive points indicating the movement of the selected indicators, on the other.

The indicators are:

total (economic and non-economic) employment,

the acquisition value of fixed assets, and

gross domestic product.

This data refers to the so-called social ('socially owned', 'self-managed', non-private) sector of the economy.

¹⁰ See V. R. Fuchs, *Changes in the Location...*

¹¹ Thirlwall examined changes in the sectoral composition of the United Kingdom's regions in the postwar period, dividing it into sub-periods. He presented the structural shift obtained by applying Shift-Share Analysis as a trend. If a trend was upward, the region's sectoral structure was improved, and vice versa. (See: A. P. Thirlwall, A Measure of the Proper Distribution of Manufacturing, *Oxford Economic Papers*, 19, March 1967, pp. 46–58)

Chapter B

THE COMPONENTS OF REGIONAL SECTORAL EMPLOYMENT CHANGE

The components of regional sectoral employment change encompass total employment, i.e. in addition to *economic* activities (manufacturing and mining, agriculture and fisheries, forestry, water management, construction, transport and transport and communication, trade, catering and tourism , and the productive part of the housing industry) it also includes *non-economic* activities (financial and other services, education and culture, health and social protection, and socio-political communities and organizations). This indicator reflects *economic* as well as *social changes* in republics and provinces.

The data for 1952 is lacking for employment in water management, catering and tourism, financial services, and health and social protection, while there is no data for 1960 for financial and similar services. The lack of data for the base year of the sub-period being reviewed causes a disequilibria in the sums for regional shift-share analysis employment change components and real change. Thus, the only practical solution must be resorted to, where the difference in employment between the base year, for which data is lacking, and the final year, for which there is data in the relevant sectors, is considered to reflect a rise in employment, i.e. on the whole is attributed to a differential shift, or allocation effect, to be more exact. Algebraically, that can be represented in the following form. Considering that:

$$P_{ij} = (x_{ij}^0 X' / X^0 - x_{ij}^0) = x_{ij}^0 (X' / X^0)$$

$$s_{ij} = x_{ij}^0 (X'_i / X_i^0 - X' / X^0)$$

$$d_{ij} = (xt_{ij} - x_{ij}^0 X'_i / X_i^0)$$

$$d'_{ij} = (x'_{ij} / x_{ij}^0 - X'_i / X_i^0) X_j^0 X_i^0 / X^0$$

$$d''_{ij} = d_{ij} - d'_{ij},$$

and assuming that

$$x_{ij}^0 = 0,$$

it follows that:

$$P_{ij} = 0; s_{ij} = 0; d_{ij} = 0; d'_{ij} = 0 \text{ and } d''_{ij} = d_{ij} = xt_{ij}$$

Since the values obtained following this procedure are based on additional assumptions, they are given in parentheses in the tables with the results of the analysis.

The tables contain information about real change, proportional share, and structural and differential shifts for all sectors in the region. The total differential shift is broken down into net differential shift and allocation effect. In the last column of the table the Type of allocation effect for every sector in the region is given. These data is organized by sub-periods.

BOSNIA AND HERZEGOVINA

The results of the shift-share analysis of employment in Bosnia and Herzegovina are given in Table 1.3. In four of the seven sub-periods subject to analysis (1952–1960, 1960–1965, 1965–1970. и 1975–1979) the real change is less than the proportional share that would have occurred if employment growth in Bosnia and Herzegovina had been equal to the average Yugoslav employment growth rate, while in three sub-periods (1970–1975, 1979–1983. и 1983–1990) it was the opposite.

In the first sub-period (1952–1960) both the total structural (–43495) and the total differential shift (–10017) were negative. That means that in this particular sub-period in Bosnia and Herzegovina slow growth sectors predominated, but also that the growth in employment in this region was below the Yugoslav average. According to the first parameter, employment in Bosnia and Herzegovina was 43495 and, according to the second, 10017 workers less than would be suggested by regional share (191820). At the same time, the greatest negative structural shift was noted in the area of forestry (where there was a “loss” of 24212 employees), while the greatest negative differential shift was recorded in construction (due to slower growth 27013 fewer workers were employed).

The net differential shift (–23463) indicates that slower growth in employment in Bosnia and Herzegovina was the leading cause of lower employment than the total differential shift might indicate (–10017).

In this particular sub-period in Bosnia and Herzegovina there was not a single sector that was characterized by the Type 4 allocation effect, which means that this republic did not specialize in any sector where it held comparative advantages. In three sectors (transport and communication, housing, and education and culture) this republic turned out to be comparatively successful, but without specializing in any of them (allocation effect Type 3). Predominantly, the sectors are characterized by the Type 2 allocation effect, i.e. sectors which are comparatively unsuccessful but, fortunately, Bosnia and Herzegovina did not specialize in them. These are: agriculture and fisheries, manufacturing and mining, artisanship, trade and socio-political communities and organizations. Finally, in this sub-period Bosnia and Herzegovina

specialized in two sectors (forestry and construction) in which it was comparatively unsuccessful (Type 1 allocation effect).

From 1960 to 1965 the total negative effect of the two shifts was the result of the overall negative impact of the unfavorable structure (7971 fewer employed) while the total differential shift was positive (3088 workers). The net differential shift, however, (-3486) indicates that in the hypothetical average structure of employment in Bosnia and Herzegovina the negative consequences of the slower growth of regional employment could still be felt.

The greatest contribution to a negative structural shift was provided by artisanship (12495 fewer employees). In spite of the positive total differential shift, the pronouncedly negative impact of manufacturing (17657 fewer employees) should be stressed.

In this particular sub-period two sectors were marked by the Type 4 allocation effect. These were construction and housing. Type 3 allocation effect sectors were still predominant, i.e. the following five sectors: artisanship, trade, education and culture, health and social protection, and socio-political organizations and communities. Agriculture, water management, and catering and tourism are comparatively unsuccessful sectors in which this republic did not specialize in (Type 2). The least favorable scenario (Type 1 – specialization in comparatively unsuccessful sectors) manifested itself in forestry, manufacturing and transport and communication.

The fact that real change (18617 employed) in the (“reform”) sub-period from 1965 to 1970 is less than hypothetical regional share (24843 employed), was owed to both a negative structural (-1798) and negative total differential shift (-4441). The net differential shift (4285 fewer employed) accounts for the greater part of the latter.

The negative structural shift was caused mostly by forestry with 8478 fewer employed, while construction made the greatest contribution to the negative differential shift (6124 fewer employed).

In this sub-period Bosnia and Herzegovina specialized in only one comparatively successful sector – forestry (Type 4). Allocation Type 3 sectors continued to predominate. There were six in this category: agriculture, water management, trade, housing, education and culture, and health and social protection. Allocation Type 2 sectors were reduced to two (manufacturing and catering and tourism) while the number of sectors characterized by the least favorable conditions (allocation effect Type 1) increased, which was recorded in construction, artisanship, transport and communication, financial services, and socio-political organizations and communities.

In the first sub-period where real change (156977) exceeded proportionate regional share (122561), i.e. in the first “consensual” sub-period (1970–1975), the difference should be ascribed to the positive total differential shift which exceeded the negative structural shift (-3617) by more than tenfold (380330 workers). Of the total differential shift, almost 100% refers to the net differential shift (37930 employed).

The biggest component of the positive total shift was manufacturing (20678 employed), while the negative structural shift saw the greatest impact in construction (-4807) and forestry (-4760).

In this sub-period the number of sectors characterized by the most favorable Type 4 allocation effect increased markedly. Thus, Type 4 was evident in forestry, construction, artisanship, transport and communication, housing, and education and culture. The Type 3 allocation effect appears in five sectors: water management, manufacturing, trade, catering and tourism, and health and social protection. Agriculture and financial services are marked by the Type 2 allocation effect, while in the case of socio-political organizations and communities we find the least favorable combination, i.e. specialization in a comparatively unsuccessful sector (allocation effect Type 1).

In the other "consensual" sub-period (1975-1979) the real change in employment (118257) was two thousand workers less than the hypothetical regional share (120218). This was due to the positive total differential shift (1710 workers), and more than anything else its "net" component (5779 employed). The structural shift was negative and decreased potential employment growth by 3671 workers.

The factors which had the greatest influence on the negative structural shift were forestry (-6850) and manufacturing (-5474), while the positive differential shift was mostly due to manufacturing (5961 workers).

In this sub-period Bosnia and Herzegovina specialized in two comparatively good sectors - manufacturing and housing, which are characterized by the allocation effect Type 4. This republic did not specialize in five comparatively good sectors (Type 3), i.e. agriculture, water management, catering and tourism, financial services, and socio-political organizations and communities. Three sectors are marked by allocation effect Type 2 (artisanship, trade, and health and social protection), while the number of sectors which were not comparatively good, and in which the republic did specialize (Type 1) increased in this regard by comparison to the previous sub-period, i.e. forestry, construction, transport and communication, and education and culture.

In the sub-period in which the majority of Yugoslav economic indicators showed a negative trend, manifesting the depth of the country's crisis (1979-1983), the real change in employment in Bosnia and Herzegovina (139575) considerably exceeded hypothetical regional share (84396). The difference was caused by the positive total (57606 workers), and more so by the net (60866 workers) differential shift. The negative structural shift amounted to only 2428 employees.

However, the negative structural shift was greatly influenced by construction (-10221 workers). The greatest influence on the positive differential shift was exercised by manufacturing (33600 workers).

In this markedly crisis-ridden sub-period, Bosnia and Herzegovina specialized in two sectors in which it had comparative advantages (Type 4 allocation effect), i.e. manufacturing and construction. In this sub-period the most numerous

sectors marked by the Type 3 allocation effect, a total eight out of fourteen sectors, were: agriculture, water management, artisanship, transport and communication, trade, catering and tourism, financial services, and socio-political organizations and communities. Health and social protection were the only sector in which Bosnia and Herzegovina did not specialize in and, incidentally, was comparatively weak (Type 2). The three sectors in this period in which this republic did specialize in were, unfortunately, comparatively weak (Type 1), i.e. forestry, housing, and education and culture.

In the last (crisis-harmonized-new reform) sub-period (1983–1990) Bosnia and Herzegovina noted considerable (though somewhat less than in the preceding sub-period) positive real change in employment (100042 workers) in relation to what was “expected” (regional share was 56 684 workers). That was, again, the result of a positive total differential shift (47163 workers), to which the net differential shift was practically identical (47331 employees). The structural shift influenced the difference by a “reduction” of 3 805 workers.

The negative structural shift was mainly influenced by construction (22 930 fewer employees) while the high positive total differential shift was due primarily to manufacturing (31471 more employees).

In this, as in the preceding sub-period, Bosnia and Herzegovina specialized in two comparatively strong sectors: manufacturing and housing (allocation effect Type 4). The still predominating sectors marked by the Type 3 allocation effect were: water management, artisanship, transport and communication, trade, financial services and socio-political organizations and communities. The number of comparatively weak, non-specialized sectors (Type 2) also increased: agriculture, education and culture, and health and social protection. In this sub-period forestry and construction figure as sectors in which the republic did specialize in even though they were comparatively weak (Type 1).

Table 1.3 EMPLOYMENT IN BOSNIA AND HERZEGOVINA:
RESULTS OF THE SHISHA RESULTS

Sector	Real change	Proportional share	Structural change	Differential change			
				Total	Net differential change	Allocation Effect	
						Amount	Type
1952–1960							
TOT	138308	191820	-43495	-10017	-23463	13445	1
AGR	7105	7753	3294	-3942	-7394	3452	
WAT	(700)	0	0	(700)	0	(700)	
FOR	-753	23795	-24212	-335	-135	-200	1
MAN	74589	61706	15564	-2680	-2782	101	2
CON	-2288	39069	-14344	-27013	-17091	-9922	1
CRA	12570	6197	7595	-1222	-1658	436	2
TRC	10792	12944	-5719	3567	4380	-812	3
TRD	621	14085	-10374	-3090	-3990	901	2
TOU	(7232)	0	0	(7232)	0	(7232)	-
HSN	5821	1969	1121	2731	3619	-887	3
FIN	-	-	-	-	-	-	-
EDU	1318	13367	-13811	1763	2669	-906	3
HEA	(13140)	0	0	(13140)	0	(13140)	-
SPC	7461	10936	-2607	-868	-1079	212	2
1960–1965							
TOT	89612	94494	-7971	3088	-3486	6574	-
AGR	-4874	4174	-7516	-1533	-3100	1567	2
WAT	8	164	-94	-62	-116	54	2
FOR	-2675	7524	-7290	-2910	-1045	-1864	1
MAN	27451	37451	7657	-17657	-16448	-1209	1
CON	12169	12108	-1513	1574	1339	235	4
CRA	-3481	4952	-12495	4062	5146	-1084	3
TRC	10957	6718	4542	-304	-288	-16	1
TRD	14485	4704	7491	2290	3013	-723	3
TOU	3958	1695	3205	-942	-1057	115	2
HSN	-482	2001	289	-2773	-2206	-567	4

FIN	(11928)	0	0	(11928)	0	(11928)	0
EDU	12968	4635	3980	4353	5300	-947	3
HEA	6745	3080	1817	1848	2312	-463	3
SPC	455	5288	-8045	3213	3664	-452	3
1965–1970							
TOT	18604	24843	-1798	-4441	-4285	-156	-
AGR	-2885	652	-3828	290	651	-360	3
WAT	138	36	84	19	37	-19	3
FOR	-3873	1484	-8478	3122	1220	1901	4
MAN	5180	9440	-753	-3507	-3540	33	2
CON	-1051	3218	1855	-6124	-5031	-1093	1
CRA	-1132	890	-1784	-238	-230	-8	1
TRC	37	1997	640	-2601	-2462	-138	1
TRD	7398	1742	4065	1591	1935	-344	3
TOU	627	564	1111	-1048	-1262	214	2
HSN	2298	406	1062	830	879	-49	3
FIN	-303	601	273	-1177	-1177	-1	1
EDU	9606	1651	4044	3911	4088	-177	3
HEA	3507	1002	1654	850	955	-105	3
SPC	-943	1160	-1743	-360	-350	-10	1
1970–1975							
TOT	156977	122561	-3617	38033	37930	103	-
AGR	-284	2409	-1305	-1388	-2983	1595	2
WAT	142	203	-97 36	71	-34	3	
FOR	1390	6125	-4760	25	9	17	4
MAN	71332	46117	4851	20364	20678	-314	3
CON	13653	15046	-4807	3414	3041	373	4
CRA	1661	3958	-2631	334	323	11	4
TRC	10256	9505	-2071	2823	2814	9	4
TRD	19851	10054	3860	5936	6863	-927	3
TOU	7199	2832	1730	2637	3416	-779	3
HSN	3252	2482	129	641	617	24	4
FIN	3663	2786	1096	-219	-238	19	2
EDU	11922	10149	-1132	2905	2723	182	4
HEA	7918	5606	1398	914	977	-63	3
SPC	5022	5290	121	-389	-380	-9	1

1975–1979							
TOT	118257	120218	-3671	1710	5779	-4069	-
AGR	1816	1757	-1134	1193	3088	-1894	3
WAT	546	178	94	274	541	-266	3
FOR	-3582	4847	-6850	-1578	-564	-1015	1
MAN	47001	47441	-6474	6034	5961	73	4
CON	14920	13748	5928	-4756	-4267	-489	1
CRA	4329	3269	1331	-271	-272	0	2
TRC	4424	8978	-2930	-1624	-1610	-14	1
TRD	10357	11116	-429	-331	-364	34	2
TOU	5676	3420	1216	1040	1223	-183	3
HSN	4554	2448	-278	2384	2305	80	4
FIN	9008	2750	4624	1634	1900	-266	3
EDU	3776	9762	-3490	-2495	-2334	-161	1
HEA	7070	5632	2264	-825	-903	78	2
SPC	8362	4874	2456	1032	1077	-45	3
1979–1983							
TOT	139575	84396	-2428	57606	60866	-3260	-
AGR	4439	1243	628	2569	5947	-3378	3
WAT	418	165	-17	270	436	-166	3
FOR	899	2507	-1165	-442	-168	-274	1
MAN	75022	33341	6908	34773	33600	1172	4
CON	8177	9801	-10221	8597	8094	503	4
CRA	4108	2414	721	973	983	-11	3
TRC	6802	5830	-971	1943	1979	-36	3
TRD	13390	7742	414	5234	5779	-545	3
TOU	5431	2649	629	2153	2420	-267	3
HSN	1643	1949	216	-521	-437	-85	1
FIN	7240	2607	1555	3078	3331	-253	3
EDU	2963	6228	-2378	-887	-863	-24	1
HEA	5485	4118	2335	-968	-1079	112	2
SPC	3558	3804	-1082	836	845	-9	3
1983–1990							
TOT	100042	56684	-3805	47163	47331	-168	-
AGR	1128	981	789	-641	-1326	685	2
WAT	27	120	-226	134	198	-64	3

FOR	-2362	1485	-2720	-1127	-464	-663	1
MAN	78180	23610	23099	31471	29421	2049	4
CON	-24669	6091	-22930	-7831	-7163	-668	1
CRA	5613	1629	-5277	9262	9593	-332	3
TRC	7656	3742	-899	4813	5047	-234	3
TRD	8605	5236	-1373	4742	5227	-485	3
TOU	6634	1484	-493	5284	5864	-580	3
HSN	561	1212	-949	298	272	26	4
FIN	7150	1930	2480	2740	2845	-105	3
EDU	3033	3734	1146	-1847	-1939	92	2
HEA	9111	2685	7075	-648	-786	136	2
SPC	-6215	2388	-3527	514	541	-27	3

MONTENEGRO

The results of the components of regional sectoral employment analysis in Montenegro are expressed in Table 1.4. In all seven analyzed sub-periods actual change exceeded proportional share which would have resulted had employment growth in Montenegro been equal to Yugoslavia's average employment growth. This is due to the positive differential change which in all sub-periods exceeded the generally negative structural change; the effect of structure turned out to be positive only in the sub-periods between 1965–1970 and 1975–1979, and even then it was significantly lower than the differential change.

In the first sub-period (1952–1960) the total differential change was 11871, while the total structural change was –5424 workers. That means that in that particular sub-period in Montenegro slow growing sectors were predominant, while employment growth in that region was higher than the Yugoslav average. Based on the first criterion, employment in this republic was lower by 5424, and based on the second, it was higher by 11871 workers. That means that the net effect of these two shifts resulted in actual change (by 6447 workers) which was greater than what is suggested by regional share (21613). The greatest structural shift happened in the areas of education and culture (causing a “loss” of 3287 employees), while the greatest positive differential shift was shown by the manufacturing, the accelerated growth of which resulted in the employment of 5212 additional workers.

The high positive net differential shift (34984) indicates that accelerated employment growth in Montenegro was caused by that particular component of the total differential shift and that it was not the effect of allocation that reduced growth by 23114 employees.

During that sub-period in Montenegro three sectors appeared which were characterized by the Type 4 allocation effect: construction, housing and community development, and education and culture. That means that this republic specialized in three sectors in which it held comparative advantages. In three other sectors (agriculture, forestry, and manufacturing) this republic showed comparatively good results without specializing in them (Type 3 allocation effect). Between 1952 and 1960 in Montenegro there was not a single Type 2 allocation effect sector. The sectors which predominated were marked by the Type 1 allocation effect, i.e. comparatively inferior sectors in which Montenegro unfortunately specialized in. These are: artisanship, transport and communication, trade, and socio-political communities and organizations.

Between 1960 and 1965 the small (a total of only 11 workers), but, nevertheless positive total effect of the two shifts was the result of the predominant positive impact of the net differential shift (7484 workers) in the structure of the total differential shift (1249 employees) on the unfavorable structure which caused a reduction in the number of employees by 1138. The greatest contribution to the negative structural shift in this period (as in Bosnia and Herzegovina in the same sub-period) occurred in the artisanship sector (2057 fewer employees). manufacturing was the biggest factor in the positive differential shift (2782 employees). At the same time, despite the positive differential shift, the notable negative impact of the construction manufacturing should be stressed (6968 fewer employees).

In this period in Montenegro there were two sectors marked by the Type 4 allocation effect – services and tourism and socio-political organizations and communities. Four sectors were characterized by the Type 3 allocation effect: forestry, the manufacturing, artisanship, and transport and communication. Agriculture, water management, and trade were comparatively inferior sectors in which this republic did not specialize in (Type 2). The most unfavorable variant (Type 1: specialization in comparatively unfavorable sectors) was found in four sectors: construction, housing, education and culture, and social welfare.

The fact that real change (5441 employees) in the “reform” sub-period between 1965 and 1970 was greater than the hypothetical regional share (by 3607 employees) is due to the positive structural (70) and positive total differential shift (1763). The greater part of the latter is attributable to the net differential shift (1848 fewer employees).

Education and culture, which showed an increase of 778 employees, were the most credited for the positive structural shift, while catering and tourism was the biggest factor in the positive differential shift (an increase of 1303 employees).

In this particular sub-period Montenegro specialized in four comparatively good sectors: forestry, construction, catering and tourism, and housing. Three of these are Type 3 allocation effect sectors: agriculture, trade, and health and social welfare. Type 2 allocation effect sectors were reduced to two (manufacturing and water management), while the number of sectors which characterize the least favor-

able conditions (Type 1), i.e. artisanship, education and culture, financial services, and socio-political organizations and communities, remained the same.

Real change (22030) exceeded proportional regional share (18460) in the 1970–1975 sub-period due to a positive total differential shift which was more than eight times (4077 workers) greater than the negative structural shift (–507 employees). The net differential shift was even greater than the total differential shift (5110 employees).

The positive total shift was caused mostly by trade (2385 employees), while the decisive influence on the negative structural shift was caused by construction (–754) and artisanship (–690).

In this sub-period there was a significant increase in the number of sectors characterized by an unfavorable Type of allocation effect. Type 4 is evident in forestry, artisanship, transport and communication, catering and tourism, culture, and socio-political organizations and communities. The Type 3 allocation effect appears in six sectors: agriculture, water management, the manufacturing, trade, health and social welfare, and financial services. Not a single sector in this sub-period is marked by the Type 2 allocation effect. In the case of construction and housing the least favorable combination is seen: specialization in a comparatively inferior sector (Type 1 allocation effect).

In the second, “consensual,” sub-period (1975–1979) real employment change (20345) to the tune of about two and a half thousand workers is greater than hypothetical regional share (17817). A contributing factor to this was the positive total differential shift numbering 2041 workers, where the key factor was the “net” component (3160 employees) and a structural shift involving 487 workers.

The positive structural shift was mostly rooted in financial services (879) and construction (793 workers), while the positive differential shift mostly owed to manufacturing (2580 workers) and trade (1772 employees).

During this period Montenegro specialized in five comparatively advantageous sectors: forestry, transport and communication, education and culture, housing, and socio-political organizations and communities. These were characterized by allocation Type 4. This republic did not specialize in three comparatively advantageous Type 3 sectors: the manufacturing, water management, and trade. In this sub-period only agriculture is characterized by allocation Type 2, while the number of sectors which are not comparatively advantageous, but in which the republic did specialize in (Type 1), increased in relation to the preceding sub-period. These sectors are: construction, catering and tourism, financial services, artisanship, and health and welfare services.

Table 1.4 EMPLOYMENT IN MONTENEGRO:
SHISHA RESULTS

Sector	Real change	Proportional share	Structural change	Differential change			
				Total	Net differential change	Allocation Effect	
						Amount	Type
1952–1960							
TOT	28060	21613	-5424	11871	34984	-23114	-
AGR	1575	1093	464	18	27	-9	3
WAT	(164)	0	0	(164)	0	(164)	0
FOR	628	28	-29	628	24026	-23398	3
MAN	9679	3567	900	5212	10542	-5330	3
CON	5454	5508	-2022	1968	995	973	4
CRA	1871	1164	1426	-719	-585	-134	1
TRC	949	1957	-865	-144	-131	-12	1
TRD	122	2225	-1639	-464	-428	-37	1
TOU	(1772)	0	0	(1772)	0	(1772)	-
HSN	1127	393	223	511	383	128	4
FIN	-	-	-	-	-	-	-
EDU	251	3181	-3287	357	256	101	4
HEA	(2730)	0	0	(2730)	0	(2730)	-
SPC	1738	2496	-595	-163	-100	-63	1
1960–1965							
TOT	13682	13571	-1138	1249	7484	-6235	-
AGR	-686	723	-1301	-107	-180	73	2
WAT	-144	38	-22	-160	-183	23	2
FOR	2091	156	-151	2086	5180	-3094	3
MAN	6905	3423	700	2782	4073	-1290	3
CON	-4290	3061	-382	-6968	-3367	-3601	1
CRA	1156	815	-2057	2398	2650	-252	3
TRC	2756	856	579	1321	1414	-92	3
TRD	748	749	1192	-1193	-1416	223	2
TOU	1592	415	785	391	257	134	4
HSN	33	391	57	-415	-242	-172	1

FIN	(1971)	0	0	(1971)	0	(1971)	-
EDU	1657	1088	935	-366	-273	-93	1
HEA	503	640	378	-514	-445	-70	1
SPC	-610	1215	-1849	24	17	7	4
1965–1970							
TOT	5441	3609	70	1763	1648	114	-
AGR	-247	121	-709	342	600	-258	3
WAT	3	1	2	-0	-4	3	2
FOR	-229	139	-795	426	258	168	4
MAN	148	1084	-86	-850	-1085	235	2
CON	1078	442	255	381	331	50	4
CRA	-305	234	-468	-70	-37	-33	1
TRC	650	323	104	223	190	33	4
TRD	1494	199	464	831	1287	-456	3
TOU	1806	170	334	1303	758	544	4
HSN	488	86	224	178	130	48	4
FIN	-197	99	45	-341	-300	-41	1
EDU	663	318	778	-433	-342	-91	1
HEA	511	163	269	79	79	-0	3
SPC	-422	231	-347	-306	-217	-89	1
1970–1975							
TOT	22030	18460	-507	4077	5110	-1033	-
AGR	252	515	-279	16	24	-8	3
WAT	20	6	-3	17	184	-167	3
FOR	198	606	-471	63	32	30	4
MAN	6142	5190	546	406	551	-146	3
CON	374	2360	-754	-1232	-1054	-178	1
CRA	512	1037	-690	164	91	73	4
TRC	2325	1691	-369	1002	845	157	4
TRD	4188	1303	500	2385	3205	-820	3
TOU	2111	1239	757	115	51	64	4
HSN	398	525	27	-154	-106	-49	1
FIN	1133	425	167	541	580	-40	3
EDU	1623	1669	-186	140	120	20	4
HEA	1585	897	224	464	467	-3	3
SPC	1169	995	23	151	118	33	4

1975–1979							
TOT	20345	17817	487	2041	3160	-1119	-
AGR	-647	432	-279	-800	-1247	447	2
WAT	23	8	4	11	75	-64	3
FOR	422	490	-693	625	327	298	4
MAN	6898	5000	-682	2580	3584	-1004	3
CON	1710	1839	793	-921	-916	-5	1
CRA	-382	871	355	-1607	-896	-712	1
TRC	2007	1688	-551	870	680	190	4
TRD	3436	1731	-67	1772	1858	-86	3
TOU	1377	1310	466	-398	-181	-217	1
HSN	426	465	-53	13	10	3	4
FIN	984	523	879	-418	-379	-39	1
EDU	1006	1544	-552	14	12	2	4
HEA	1321	958	385	-23	-22	-1	1
SPC	1764	957	482	324	255	69	4
1979–1983							
TOT	23038	12810	-311	10539	10919	-380	-
AGR	584	188	95	300	697	-396	3
WAT	55	7	-1	49 277	-228	3	
FOR	-243	338	-157	-424	-181	-242	1
MAN	7516	3723	771	3022	3970	-948	3
CON	253	1280	-1335	308	337	-29	3
CRA	1174	478	143	553	428	125	4
TRC	1926	1222	-203	907	669	238	4
TRD	3586	1401	75	2110	1954	156	4
TOU	2198	929	221	1048	510	538	4
HSN	592	323	36	233	178	54	4
FIN	866	417	249	199	205	-5	3
EDU	1356	1029	-393	720	643	76	4
HEA	1458	713	405	340	332	8	4
SPC	1717	760	-216	1173	900	273	4
1983–1990							
TOT	16947	8717	-1343	9573	16899	-7327	-
AGR	4094	143	115	3836	8349	-4514	3
WAT	-61	7	-14	-54	-200	145	2

FOR	84	178	-326	232	123	109	4
MAN	13731	2584	2528	8620	11326	-2706	3
CON	-2367	746	-2807	-306	-351	46	2
CRA	-3390	345	-1117	-2618	-1970	-648	1
TRC	958	815	-196	339	251	88	4
TRD	-176	1019	-267	-928	-808	-120	4
TOU	866	664	-178	379	180	200	4
HSN	-162	221	-173	-210	-162	-48	1
FIN	-121	291	374	-786	-832	46	2
EDU	1473	670	206	597	537	60	1
HEA	2213	496	1308	409	413	-4	3
SPC	-195	539	-796	62	44	18	4

During the initial crisis sub-period (1979–1983), the real change in employment in Montenegro (23038) was considerably higher than the hypothetical regional share (23038). The difference was caused by the positive total (10539 workers) and to an even greater extent the net (10919 workers) differential shift. The negative structural shift equaled only 311 fewer employees.

However, the negative structural shift was impacted considerably by construction (1335 workers), manufacturing (3022 workers) and trade (2110 employees) had the greatest impact on the positive differential shift.

In this sub-period Montenegro specialized in as many as eight sectors in which it had comparative advantages (Type 4 allocation effect). These are: artisanship, transport and communication, trade, catering and tourism, socio-political organizations and communities, health and social welfare, and education and culture. In this sub-period there were five sectors which were marked by the Type 3 allocation effect: agriculture, water management, manufacturing, construction, and financial services. There were no Type 2 sectors in the 1979–1983 period. Forestry was the only sector in which this republic specialized in in this particular sub-period but which, unfortunately, was comparatively disadvantageous (Type 1).

In the last sub-period (1983–1990) Montenegro continued to see a considerable (although somewhat reduced compared to the preceding sub-period) increase in real employment change (16947 workers) compared to what was “expected” (the regional share was 8717 workers). This was again the result of the impact of the positive total differential shift (9573 workers). The net differential shift (16899 employees) was considerably higher. The structural shift affected the quoted difference to the tune of 7327 fewer workers.

As in the preceding period, the most significant factor in the negative structural shift was construction (2807 employees less), while the high positive total dif-

ferential shift was again due to manufacturing (plus 8620) and agriculture (3836 more employees).

In this sub-period Montenegro specialized in five comparatively good sectors: forestry, transport and communication, catering and tourism, education and culture, and socio-political organizations and communities (Type 4 allocation effect). There were three Type 3 allocation effect sectors: agriculture, the manufacturing, and health and social welfare. There was an equal number of comparatively disadvantageous, non-specialized sectors (Type 2): water management, construction, and financial services. Artisanry, trade, and housing during this period were sectors in which the republic specialized in although they were comparatively disadvantageous (Type 1).

CROATIA

The findings of the shift-share analysis of employment in Croatia are presented in *Table 1.5*. In five of the seven analyzed sub-periods (1952–1960, 1960–1965, 1965–1970, 1970–1975, 1979–1983, and 1983–1990) real change is less than the proportional share which would have been achieved had employment growth in Croatia been equal to the average Yugoslav growth rate, while the situation was reversed in only one sub-period (1975–1979).

During the first sub period (1952–1960) the structural shift was negative (–59177), while the total differential shift was positive (24861). This means that in this sub-period in Croatia slow growth sectors predominated but also that employment growth in this region was above the Yugoslav average. For both parameters, in net terms, the employment figures for Croatia showed 34316 fewer workers than what regional share would have suggested (333613 employees). At the same time, the greatest negative structural shift was in education and culture (which showed a loss of 23348 employees), while the greatest positive differential shift was recorded in the artisanship, where due to accelerated growth 27013 more workers were employed.

The negative net differential shift (–27778) indicates that the regionally caused accelerated employment increase in Croatia came about as a result of the positive allocation effect (52639 workers).

During this period in Croatia transport and communication were characterized by the Type 4 allocation effect, which means that this republic specialized in just one sector in which it had a comparative advantage. Also in just one sector – artisanship – this republic turned out to be comparatively good but without specialization (Type 3 allocation effect). Sectors marked by Type 2 allocation effect predominate, i.e. sectors which are comparatively disadvantageous but in which, fortunately, Croatia did not specialize in. These are agriculture and fisheries, con-

struction, education and culture, and socio-political communities and organizations. Finally, during this period Croatia specialized in four sectors (forestry, manufacturing and mining, trade, and housing) in which it was comparatively inferior (Type 1 allocation effect).

Between 1960 and 1965 the total negative effect of the two shifts (2788 workers) was the result of the predominant negative impact of an unfavorable structure (14985 fewer employed), while the total differential shift was positive (13197 workers). The net differential shift (-7695), however, indicates that in the hypothetical average structure of employment in Croatia the positive consequences of the allocation effect had a greater impact on total accelerated growth in regional employment.

The biggest contributor to the negative structural shift (as in Bosnia and Herzegovina in the same period) were artisanship (31576 fewer employees). In spite of the positive total differential shift, the notably negative impact of manufacturing should be emphasized (20076 employees). The positive aspect of this shift was mostly concentrated in construction (11956 employed).

During this sub-period there were three sectors marked by the Type 4 allocation effect: water management, artisanship, and catering and tourism. Four sectors were characterized by the Type 3 allocation effect: construction, housing, education and culture, and socio-political organizations and communities. Agriculture stands out as a comparatively inferior sector in which the republic did not specialize in (Type 2). During this sub-period the worst Type sectors predominated (specialization in the comparatively inferior Type 1 sectors). This category characterizes forestry, manufacturing, transport and communication, trade, and health and social welfare.

The fact that the actual change (6972 employees) in the 1965 to 1970 sub-period was considerably smaller than hypothetical regional share (47201 employees) is due to the total negative differential shift (-43995). The greater part of the latter is the net differential shift (43840 fewer employees). The structural shift was positive and constituted 3766 employees.

The fact that on the whole the structural shift was positive is mostly due to trade which showed an increase of 9324 in the number of employed, while manufacturing was most responsible for the negative differential shift with 20862 fewer employees.

In this sub-period Croatia specialized in two comparatively good sectors: catering and tourism and financial services. Only one sector, trade, was characterized by the Type 3 allocation effect. The Type 2 and 1 allocation effect factors predominate. There were five in the first category: agriculture, construction, the manufacturing, education and culture, and socio-political organizations and communities and six in the second category: forestry, artisanship, transport and communication, water management, housing, and health and social welfare.

In the 1970 to 1975 sub-period, real change in Croatia (188770) was less than the proportional regional share (226061 workers). The difference is attributable to

the negative total differential shift (39152 employees) which considerably exceeded the positive structural shift of 1861 workers. Of the total differential shift, almost 100% corresponds to the net differential shift (–38870 employees).

The manufacturing, with –20526 employees, contributed the most to the negative differential shift, while manufacturing (8766) and trade (8553 employees) had a decisive impact on the positive structural shift.

In this sub-period the number of sectors characterized by the most favorable Type of allocation effect did not change. Type 4 is evident with regard to water management and catering and tourism. Agriculture and socio-political organizations and communities are characterized by the Type 3 allocation effect. Forestry, construction, the manufacturing, and education and culture are characterized by the Type 2 allocation effect. In six instances the least favorable combination appears: specialization in a comparatively inferior sector (Type 1 allocation effect) such as health and social welfare, financial services, artisanship, transport and communication, and housing.

Only during the second “consensual” (1975–1979) sub-period was the real change in employment (204868) slightly higher than hypothetical regional share (203615). That can be attributed to a positive structural shift of 1837 workers. The total differential shift, although its net component was positive at around 185 workers, was negative and reduced potential employment growth by 583 workers.

The positive structural shift owed mostly to financial services (9599) and construction (8573 workers), while the negative differential shift was mostly due to manufacturing (–5712 workers).

In this sub-period Croatia specialized in three comparatively good sectors: trade, housing, and financial services, characterized by the Type 4 allocation effect. This republic did not specialize in four comparatively good sectors (Type 3): agriculture, forestry, construction, health and social welfare, and socio-political organizations and communities. Two sectors were Type 2 (manufacturing and education and culture), while the number of sectors which were not comparatively good but in which the republic specialized in (Type 1) was reduced somewhat in relation to the preceding sub-period. Those sectors are transport and communication, artisanship, water management, and catering and tourism.

During the sub-period which marked the start of a profound crisis (1979–1983), real employment change in Croatia (119400) was considerably less than hypothetical regional share (143434 workers). The difference is due to the negative total (–25119 workers) and approximately identical net (–24453 workers) differential shift. The positive structural shift amounted to only 1086 employees more than proportional share would suggest.

Table 1.5 EMPLOYMENT IN CROATIA: SHISHA RESULTS

Sector	Real change	Proportional share	Structural shift	Differential shift			
				Total	Net differential change	Allocation Effect	
						Amount	Type
1952–1960							
TOT	299297	333613	-59177	24861	-27778	52639	-
AGR	25970	24217	10290	-8537	-8915	379	2
WAT	(2671)	0	0	(2671)	0	(2671)	-
FOR	-8979	24495	-24925	-8549	-5816	-2733	1
MAN	135047	112462	28365	-5781	-5725	-56	1
CON	19684	36054	-13237	-3133	-3736	603	2
CRA	35419	13016	15951	6451	7246	-795	3
TRC	21039	30771	-13597	3864	3471	394	4
TRD	7498	31700	-23348	-853	-852	-2	1
TOU	(17831)	0	0	(17831)	0	(17831)	-
HSN	6276	4585	2609	-918	-908	-10	1
FIN	-	-	-	-	-	-	-
EDU	-8245	35051	-36217	-7079	-7109	30	2
HEA	(33775)	0	0	(33775)	0	(33775)	-
SPC	11311	21261	-5069	-4881	-5433	552	2
1960–1965							
TOT	176326	178114	-14985	13197	-7696	20893	-
AGR	-15955	13924	-25069	-4810	-5496	687	2
WAT	1775	626	-357	1506	1387	119	4
FOR	-1383	5823	-5641	-1565	-1369	-196	1
MAN	61883	68047	13912	-20076	-19402	-675	1
CON	26203	16282	-2034	11956	14255	-2299	3
CRA	-17022	12514	-31576	2040	1928	113	4
TRC	24829	14890	10067	-127	-103	-25	1
TRD	27984	12016	19135	-3168	-3075	-92	1
TOU	12489	4179	7903	407	349	58	4
HSN	6938	2955	427	3556	3612	-56	3
FIN	(23347)	0	0	(23347)	0	(23347)	-

EDU	17931	9411	8082	437	494	-57	3
HEA	12258	7916	4670	-328	-301	-27	1
SPC	-4951	9532	-14503	20	24	-4	3
1965–1970							
TOT	6972	47201	3766	-43995	-43840	-154	-
AGR	-11438	2191	-12857	-772	-977	206	2
WAT	-710	224	526	-1460	-887	-573	1
FOR	-7963	1183	-6759	-2387	-2223	-163	1
MAN	-4522	17757	-1416	-20862	-21270	407	2
CON	204	4823	2780	-7399	-7705	306	2
CRA	-2733	1834	-3676	-890	-792	-98	1
TRC	1880	4454	1428	-4002	-3228	-774	1
TRD	13697	3995	9324	378	381	-3	3
TOU	6578	1528	3009	2040	1723	317	4
HSN	2802	985	2575	-759	-629	-130	1
FIN	2365	1177	534	654	634	19	4
EDU	7000	2928	7174	-3103	-3474	371	2
HEA	2146	2321	3829	-4004	-3691	-312	1
SPC	-2334	1801	-2705	-1429	-1701	271	2
1970–1975							
TOT	188770	226061	1861	-39152	-38870	-282	-
AGR	3816	7673	-4156	299	372	-73	3
WAT	804	895	-429	338	274	64	4
FOR	-156	3715	-2887	-984	-1014	30	2
MAN	71570	83330	8766	-20526	-21275	749	2
CON	14656	22978	-7341	-981	-1055	74	2
CRA	-612	8062	-5358	-3316	-2905	-410	1
TRC	14405	21626	-4713	-2508	-2027	-482	1
TRD	25471	22277	8553	-5359	-5158	-201	1
TOU	16269	8843	5401	2025	1550	476	4
HSN	4252	5356	279	-1382	-1137	-246	1
FIN	6023	6162	2424	-2563	-2324	-239	1
EDU	11382	15599	-1740	-2477	-2786	309	2
HEA	11573	11546	2880	-2854	-2733	-121	1
SPC	9317	8001	183	1133	1348	-215	3

1975–1979							
TOT	204868	203615	1837	-583	185	-768	-
AGR	4540	6445	-4161	2256	2694	-439	3
WAT	1071	817	431	-177	-128	-48	1
FOR	-540	2760	-3901	601	638	-37	3
MAN	59410	75413	-10291	-5712	-6012	300	2
CON	29647	19881	8573	1193	1253	-61	3
CRA	7388	5940	2419	-971	-907	-65	1
TRC	8735	18822	-6143	-3944	-3159	-785	1
TRD	24245	21300	-822	3766	3668	98	4
TOU	12760	9563	3400	-203	-144	-58	1
HSN	5171	4784	-543	930	779	151	4
FIN	16352	5708	9599	1045	991	53	4
EDU	7306	13754	-4918	-1530	-1721	190	2
HEA	16363	10747	4320	1296	1259	37	4
SPC	12420	7681	3871	868	974	-105	3
1979–1983							
TOT	119400	143434	1086	-25119	-24453	-666	-
AGR	8170	4332	2187	1651	1864	-213	3
WAT	640	602	-61	99	74	25	4
FOR	1215	1588	-738	365	372	-7	3
MAN	44513	51357	10642	-17485	-18642	1156	2
CON	-3765	15040	-15684	-3121	-3254	134	2
CRA	7116	4336	1295	1486	1421	64	4
TRC	6671	12164	-2026	-3468	-2877	-591	1
TRD	12463	15307	819	-3663	-3476	-186	1
TOU	7637	7073	1680	-1116	-798	-318	1
HSN	1942	3409	377	-1844	-1500	-343	1
FIN	7513	5159	3078	-724	-673	-51	1
EDU	6878	8988	-3432	1322	1515	-193	3
HEA	12809	8166	4631	12	12	1	4
SPC	5598	5914	-1682	1366	1509	-143	3
1983–1990							
TOT	53175	89125	-1800	-34150	-34691	541	-
AGR	5571	2971	2390	210	226	-15	2

WAT	-179	383	-724	162	118	45	4
FOR	-978	980	-1796	-162	-159	-3	4
MAN	37994	32019	31327	-25352	-27479	2126	2
CON	-17760	8349	-31427	5319	5581	-262	3
CRA	-13234	2908	-9425	-6719	-6126	-592	1
TRC	4892	7347	-1765	-690	-580	-111	1
TRD	4666	9494	-2489	-2339	-2235	-103	1
TOU	4713	4502	-1204	1415	1011	404	4
HSN	-3183	2063	-1615	-3631	-3066	-565	1
FIN	5380	3403	4372	-2395	-2217	-177	4
EDU	8195	5548	1703	944	1049	-105	3
HEA	18500	5442	13342	-1285	-1208	-77	1
SPC	-1402	3716	-5489	371	394	-23	3

The regional growth rate of manufacturing (17485 fewer workers) exerted a considerable influence on the negative total differential shift. The positive structural shift was enhanced for the most part by manufacturing (10642 workers) in which the share of Croatia was above average and which, in Yugoslav terms, grew at an above average rate.

During this sub-period Croatia specialized in three sectors in which it had comparative, Type 4 allocation effect advantages. These are: water management, artisanship, and health and social welfare. During this sub-period, four sectors were marked by the Type 3 allocation effect: agriculture, forestry, education and culture, and socio-political organizations and communities. manufacturing and construction are sectors in which Croatia did not specialize in during that sub-period and were comparatively inferior (Type 2). The republic specialized in five sectors during this sub-period which, unfortunately, were comparatively inferior (Type 1): transport and communication, trade, service and tourism, financial services, and housing.

In the reviewed final period in Croatia (1983–1990) the situation was similar to that of the preceding period. The real change in employment (53175 workers) was less than “expected” (the regional share was 89125 workers). This was the effect of the negative total differential shift (–34150 workers) which was exceeded somewhat by the net differential shift (–34691 employees). The structural shift affected the indicated difference with an increase of only 541 workers.

As in the preceding sub-period, the positive structural shift was caused mostly by manufacturing (with an increase of 31327 in the number of employees), while manufacturing was chiefly responsible for the high negative total differential shift (25352 fewer employees).

In this sub-period, Croatia specialized in two comparatively good sectors: water management and catering and tourism (Type 4 allocation effect). In three sectors the Type 3 allocation effect was prominent: construction, education and culture, and socio-political organizations and communities. The number of comparatively inferior, non-specialized sectors (Type 2) remained the same as in the preceding sub-period. These were manufacturing and agriculture. Artisanship, transport and communication, trade, forestry, financial services, housing, and health and social welfare were sectors in which the republic specialized in in this sub-period, although they were comparatively inferior (Type 1).

MACEDONIA

Table 1.6 reflects the results of the shift-share analysis of employment in Macedonia. In all of the sub-periods real change is greater than the proportional share that would have occurred had employment growth in this republic been equal to the average Yugoslav growth rate. In the first sub-period (1952–1960) the structural shift was negative, while the total differential shift was positive. That means that in the observed sub-period in Macedonia slow growth sectors predominated, but also that employment growth in this region was above the Yugoslav average. In the first category, employment in Macedonia was lower at around 12271 workers and in the second there were 42073 more workers, which in net terms means employment was 29856 workers higher than what regional share (64749) suggested. The greatest negative structural shift was shown by education and culture (which caused the loss of 7870 employees) while the greatest positive differential shift was shown by manufacturing (whose accelerated growth resulted in the employment of 14677 more workers).

The net differential shift of 36749 workers indicates that it, rather than the allocation effect, was the main cause of accelerated employment growth in Macedonia.

During this sub-period in Macedonia, four sectors were characterized by the Type 4 allocation effect, which means that this republic specialized in the following sectors in which it held comparative advantages: agriculture and fisheries, construction, artisanship, and education and culture. In three sectors (forestry, manufacturing and mining, and transport and communication) Macedonia showed itself to be comparatively successful, but did not specialize in any of them (Type 3 allocation effect). In this sub-period in Macedonia there was no Type 2 allocation effect sector. Finally, between 1952 and 1960 Macedonia specialized in three sectors (trade, housing, and socio-political organizations and communities) in which it was comparatively inferior (Type 1 allocation effect).

During the sub-period between 1960 and 1965, the total positive effect of these shifts was the result of the effect of the predominantly positive total differential shift

(17896 workers) over the effect of unfavorable structure (11526 fewer employees). (In all of the other periods in Macedonia the total differential shift was positive, while the structural shift was negative.) The net differential shift of 15601 workers indicates that its role in the positive total differential shift was more significant than the effect of allocation.

The greatest contribution to the negative structural shift was made by agriculture (11974 fewer workers). Manufacturing had the greatest impact on the positive total differential shift (8881 more workers).

During this sub-period three sectors characterized by Type 4 allocation effect emerged: water management, construction, and socio-political organizations and communities. Type 3 allocation effect sectors were dominant and consisted of six major Types of activities: forestry, the manufacturing, transport and communication, trade, catering and tourism, and housing. Artisanship was a comparatively inferior sector in which the republic did not specialize in (Type 2). The worst category (Type 1, specialization in comparatively inferior sectors) was present in the fields of agriculture, education and culture, and health and social welfare.

The fact that real change (21229 employees) in the 1965–1970 sub-period was considerably greater than hypothetical regional share (11772 employees) is due to the negative structural (–1177) and positive total differential shifts (10634) and in particular to the net differential shift of 11702 more employed persons.

The fact that, overall, the structural shift was negative was due mostly to agriculture, with 6727 fewer employees, while the positive differential shift was primarily stimulated by the manufacturing, with 6648 more employees.

During this sub-period Macedonia specialized in as many as six comparatively good sectors: agriculture, forestry, trade, housing, education and culture, and socio-political organizations and communities. Type 3 allocation effect sectors were relatively numerous. There were four: the manufacturing, artisanship, financial services, and health and social welfare. Three sectors were characterized by the Type 2 allocation effect: forestry, transport and communication, and catering and tourism. Only one sector was in the least favorable Type 1 category – construction.

In the 1970–1975 sub-period, where real change (78627) exceeded proportional regional share (61050) by 6567 employees, the difference was due to the positive total differential shift which exceeded by several times (18929 workers) the negative structural shift (–1352 employees). The net differential shift (20561 employees) exceeded the total differential shift.

The positive total differential shift was due mostly to manufacturing (11738 employees), while the key factors in the negative structural shift were the construction (–2504) and agriculture (–2470) sectors.

During this sub-period there was a reduction in the number of sectors characterized by the most advantageous Type of allocation effect. Type 4 occurred in agriculture, trade, and housing. The Type 3 allocation effect was predominant in six sectors: forestry, manufacturing, catering and tourism, artisanship, transport and

communication, and health and social welfare. Financial services were in the Type 2 category, while water management, construction, education and culture, and socio-economic organizations and communities turned out to be the worst sector (Type 1 allocation effect).

During the 1975–1979 sub-period, the change in real employment (68422) was greater by 8451 workers than the hypothetical regional share (59961). The total positive differential effect (10010 workers) contributed to this outcome, above all its “net” component of 6978 employees. The structural shift was negative and diminished potential employment growth by 1549 workers. The most significant contributing factors to the negative structural shift were agriculture (–2950) and manufacturing (–2976), while manufacturing had the most to do with the positive differential shift (9068 workers).

During this sub-period Macedonia specialized in three comparatively good sectors: agriculture, water management, and construction, all characterized by the Type 4 allocation effect. This republic did not specialize in one comparatively good Type 3 sector: the manufacturing. Six sectors were within the Type 2 allocation effect: forestry, transport and communication, artisanship, catering and tourism, financial services, and health and social welfare. The number of inferior sectors in which the republic did specialize in (Type 1) increased relative to the previous period. These sectors were: trade, housing, education and culture, and socio-political organizations and communities.

During the 1979–1983 sub-period the real employment shift (66147) in Macedonia exceeded by one-third (23030) hypothetical regional share (43103). The difference was the result of the total positive (23584 workers) and, to an even greater degree, net (23801 workers) differential shifts. The negative structural shift amounted to only 544 employees.

However, the negative structural shift was greatly affected by construction (–5731 workers). The manufacturing, with 14042 workers, made the most significant contribution to the positive differential shift.

During this sub-period Macedonia specialized in two sectors in which it had comparative advantages (Type 4 allocation effect) – construction and education and culture. In this sub-period Type 3 allocation effect sectors were the most numerous. There were eight of these out of fourteen: forestry, the manufacturing, trade, catering and tourism, housing, financial services, health and social welfare, and socio-political organizations and communities. Macedonia did not specialize in artisanship and transport and communication and, besides, they were comparatively inferior (Type 2). The republic in this sub-period specialized in two sectors, agriculture and water management, but they were both, unfortunately, comparatively inferior (Type 1).

During the last sub-period (1983–1990) Macedonia showed an increase in real employment of 39389 workers relative to what might have been “expected” (regional share equaled 28637 workers). This was the result of the negative structural

shift (which affected the cited difference by causing a decrease of 159 workers) in relation to the total positive differential shift (10911 workers).

The greatest impact on the negative structural shift came from construction (with as many as 13096 fewer employees), while the total positive differential shift was primarily due to health and social welfare (with an increase of 2863 in employees).

During this sub-period Macedonia specialized in four comparatively good sectors: construction, water management, trade, and manufacturing (Type 4 allocation effect). Type 3 sectors continue to predominate: forestry, transport and communication, artisanship, catering and tourism, financial services, health and social welfare, and socio-economic organizations and communities. Housing was a comparatively inferior, non-specialized Type 2 sector. During this period the republic specialized in agriculture and the education and culture sectors, although they were comparatively inferior (Type 1).

Table 1.6 EMPLOYMENT IN MACEDONIA: SHISHA RESULTS

Sector	Real change	Proportional share	Structural shift	Differential shift			
				Total	Net differential shift	Allocation effect	
						Amount	Type
1952–1960							
TOT	94605	64749	-12217	42073	36749	5324	-
AGR	18820	6920	2940	8959	6355	2604	4
WAT	(806)	0	0	(806)	0	(806)	-
FOR	1196	1763	-1794	1227	2251	-1025	3
MAN	32735	14420	3637	14677	22001	-7324	3
CON	10826	10470	-3844	4200	3347	853	4
CRA	7576	3083	3778	715	658	57	4
TRC	3617	4564	-2017	1069	1257	-187	3
TRD	-691	8661	-6379	-2973	-2108	-865	1
TOU	(2780)	0	0	(2780)	0	(2780)	-
HSN	1232	1313	747	-828	-555	-273	1
FIN	-	-	-	-	-	-	-
EDU	3889	7617	-7870	4142	3715	427	4
HEA	(7520)	0	0	(7520)	0	(7520)	-
SPC	4299	5937	-1416	-223	-172	-51	1

1960–1965							
TOT	49497	43127	-11526	17896	15601	2295	-
AGR	-5640	6650	-11974	-317	-183	-133	1
WAT	355	189	-108	274	202	72	4
FOR	76	851	-824	49	72	-22	3
MAN	23743	12339	2523	8881	11461	-2580	3
CON	6931	5926	-740	1746	1385	361	4
CRA	-7189	2773	-6998	-2964	-3060	96	2
TRC	5312	2325	1572	1415	1771	-356	3
TRD	10650	2641	4206	3803	4068	-264	3
TOU	1975	652	1232	91	122	-30	3
HSN	1026	714	103	209	213	-4	3
FIN	(5425)	0	0	(5425)	0	(5425)	-
EDU	4974	3377	2900	-1302	-993	-309	1
HEA	2716	1762	1040	-86	-86	-0	1
SPC	-857	2929	-4457	671	630	40	4
1965–1970							
TOT	21229	11772	-1177	10634	11702	-1068	-
AGR	-3711	1146	-6727	1870	1129	741	4
WAT	597	59	137	401	233	168	4
FOR	-944	187	-1068	-63	-93	30	2
MAN	10192	3851	-307	6648	7794	-1146	3
CON	491	1624	936	-2069	-1596	-473	1
CRA	979	234	-469	1214	2111	-897	3
TRC	955	768	246	-59	-69	10	2
TRD	4346	1105	2579	662	602	60	4
TOU	153	240	472	-559	-750	192	2
HSN	893	205	536	151	150	1	4
FIN	457	273	124	59	62	-2	3
EDU	4663	977	2394	1292	1081	211	4
HEA	1842	516	851	475	491	-16	3
SPC	316	587	-882	611	556	55	4
1970–1975							
TOT	78627	61050	-1352	18929	20561	-1631	-
AGR	6380	4559	-2470	4290	2426	1864	4

WAT	46	421	-202	-173	-81	-93	1
FOR	845	662	-514	697	1090	-392	3
MAN	34671	20750	2183	11738	13195	-1457	3
CON	3705	7838	-2504	-1629	-1387	-242	1
CRA	2327	1348	-896	1875	2655	-780	3
TRC	4264	3879	-845	1230	1496	-266	3
TRD	9262	6295	2417	551	507	44	4
TOU	2304	1176	718	409	636	-227	3
HSN	1788	1190	62	536	536	0	4
FIN	1502	1410	554	-462	-495	33	2
EDU	4980	5762	-643	-139	-115	-25	1
HEA	4302	2895	722	685	707	-22	3
SPC	2251	2866	66	-680	-610	-70	1
1975–1979							
TOT	68422	59961	-1549	10010	6978	3033	-
AGR	5596	4569	-2950	3976	1973	2003	4
WAT	818	324	171	322	173	149	4
FOR	-359	649	-917	-91	-121	30	2
MAN	27901	21809	-2976	9068	9719	-651	3
CON	14809	6549	2824	5436	5106	330	4
CRA	-9	1430	582	-2021	-2308	287	2
TRC	1278	3678	-1200	-1200	-1448	248	2
TRD	4715	6390	-246	-1429	-1366	-63	1
TOU	906	1297	461	-852	-1319	466	2
HSN	322	1214	-138	-754	-733	-21	1
FIN	2028	1328	2234	-1534	-1842	308	2
EDU	2908	5220	-1867	-446	-389	-57	1
HEA	3999	2946	1184	-131	-137	6	2
SPC	3510	2556	1288	-334	-331	-2	1
1979–1983							
TOT	66147	43107	-544	23584	23801	-217	-
AGR	4089	3326	1679	-916	-405	-511	1
WAT	-460	281	-28	-713	-344	-369	1
FOR	662	348	-162	476	664	-189	3

MAN	33360	16002	3316	14042	14439	-397	3
CON	5626	5495	-5731	5861	5027	834	4
CRA	-1357	852	254	-2463	-3605	1142	2
TRC	1800	2331	-388	-143	-186	43	2
TRD	8147	4317	231	3599	3639	-41	3
TOU	1529	871	207	451	788	-337	3
HSN	1002	759	84	159	175	-16	3
FIN	2409	1010	603	797	1137	-340	3
EDU	2939	3426	-1308	821	742	79	4
HEA	4973	2186	1240	1547	1660	-113	3
SPC	1428	1901	-541	68	70	-2	3
1983–1990							
TOT	39389	28637	-159	10911	15109	-4198	-
AGR	3063	2148	1728	-812	-387	-425	4
WAT	326	132	-250	444	300	145	4
FOR	121	239	-438	320	413	-93	3
MAN	23676	11170	10928	1578	1575	3	4
CON	-9209	3479	-13096	408	330	78	1
CRA	394	403	-1305	1297	2743	-1446	2
TRC	2720	1440	-346	1626	2239	-613	3
TRD	3495	2961	-776	1310	1290	20	1
TOU	2062	590	-158	1630	2853	-1223	2
HSN	-88	494	-387	-195	-221	26	3
FIN	2601	723	930	948	1327	-378	3
EDU	1742	2134	655	-1047	-972	-75	1
HEA	8503	1552	4089	2863	3033	-171	3
SPC	-17	1172	-1731	542	587	-45	3

SLOVENIA

The shift-share analysis' findings concerning employment in Slovenia are given in Table 1.7. With the exception of the 1970 to 1975 sub-period, throughout the observed period actual change was lower than the proportional share that would have been achieved had employment growth in Slovenia been equal to the average Yugoslav employment growth rate.

During the first sub-period (1952–1960) both the structural and the total differential shift were negative. That means that during this period slow growth sectors predominated in Slovenia, but also that employment growth in Slovenia was below the Yugoslav average. With regard to the first parameter, employment in Slovenia was 9702, and, according to the second, there were 18283 fewer workers than what regional share would have suggested (185700 workers). The greatest negative structural shift was registered in education and culture (causing a “loss” of 17243 employees) and the greatest negative differential shift was shown by manufacturing (the slow growth of which caused 34861 fewer workers to be employed).

The net differential shift (–34377) indicates that the regionally caused slower employment growth rate in Slovenia was to a higher degree the result of this component than the total differential shift (since the allocation effect was positive) would suggest.

In Slovenia during this period artisanship were characterized by the Type 4 allocation effect, which means that this republic specialized in only one of the sectors in which it had comparative advantages. In two sectors, (forestry and socio-political communities and organizations) this republic showed comparatively good results without being specialized in any (Type 3 allocation effect). The sectors marked by the Type 2 allocation effect were predominant, i.e. sectors which were comparatively inferior but which, fortunately, Slovenia did not specialize in. These sectors were agriculture and fisheries, construction, trade, transport and communication, housing and education and culture. Finally, in this sub-period Slovenia specialized in one sector (manufacturing and mining) in which it was comparatively inferior (Type 1 allocation effect).

Between 1960 and 1965 the total negative effect of the two shifts was the consequence of the predominant negative impact of unfavorable structure (9360 fewer employed), while the total differential shift was positive (6354 workers). The net differential shift of –3486, however, indicates that the overall positive character of the total differential shift was the result of the allocation effect.

Artisanship contributed the most to the negative structural shift (19943 fewer employees), while the positive total differential shift was due mostly to forestry (3082) and construction (3080 workers).

During this sub-period there were no Type 4 allocation effect sectors. Type 3 allocation effect sectors continued to predominate. This included six areas: water management, forestry, transport and communication, construction, catering and tourism, and housing. Agriculture, trade, education and culture, and socio-political organizations and communities were comparatively inferior sectors which this republic did not specialize in (Type 2). The least favorable option (specialization in comparatively inferior Type 1 sectors) was found in the manufacturing, artisanship, and health and social protection.

The reason for real change (24388 employees) in the 1965 to 1970 sub-period being less than hypothetical regional share (25620 employees) was due to total neg-

ative shift (–4271) being greater than the structural shift (–3040). At the same time, the net differential shift (6932 fewer employees) exceeded the total differential shift.

Agriculture was the major reason for the structural shift being negative overall. It showed 4416 fewer employees. Transport and communication were the most prominent factor that contributed to the negative differential shift (3065 fewer workers).

In this sub-period Slovenia specialized in only one comparatively good sector: the manufacturing. The number of Type 3 allocation sectors was reduced to six. There were two of these as opposed to six in the preceding sub-period – trade and financial services. The number of Type 2 allocation sectors increased to nine: agriculture, water management, forestry, construction, transport and communication, catering and tourism, housing, education and culture, and socio-political organizations and communities. The number of Type 1 or the least favorable allocation sectors was reduced somewhat to artisanship and social protection. In the only sub-period (1970–1975) in which real change (129501) exceeded proportional regional share (127638), the difference was due to a positive structural shift (3378 workers) which exceeded the negative total differential shift (–1515 employees). Almost 100% of the total differential shift was caused by the allocation effect.

Manufacturing contributed the most to the positive structural shift (6399 employees), while the negative total differential shift was again decisively impacted by manufacturing (–5709).

During this sub-period the number of sectors characterized by the most unfavorable Type of allocation effect did not change. Type 4 was evident only in the artisanship. The Type 3 allocation effect can be seen in seven sectors: water management, construction, trade, housing, financial services, education and culture, and socio-political organizations and communities. Agriculture, forestry, transport and communication, and catering and tourism were characterized by the Type 2 allocation effect, while manufacturing and health and social protection were part of the least favorable option: specialization in a comparatively inferior Type 1 allocation sector.

During the 1975 to 1979 sub-period, real employment change (98116) was 20960 workers less than hypothetical regional share (119096). Contributing to that was the negative total differential shift (–22406 workers), above all its “net” component (19891 fewer employees). The structural shift was positive, but it enhanced potential employment growth by only 1435 workers.

The positive structural shift was made possible for the most part by financial services (5568) and construction (5109), while the negative total differential shift was primarily evidenced in manufacturing (–18604 workers).

During this period Slovenia specialized in two comparatively good sectors, artisanship and financial services, characterized by allocation Type 4. This republic did not specialize in six comparatively good Type 3 sectors: forestry, transport and communication, trade, education and culture, health and social protection, and

socio-political organizations and communities. Five sectors were marked by allocation Type 2 (agriculture, water management, catering and tourism, construction, and housing), while the number of sectors which were not comparatively favorable, but which the republic did specialize in (Type 1), in this period compared to the preceding one was reduced to one – the manufacturing.

During the 1979 to 1983 sub-period, real change in employment in Slovenia (32166) was considerably less than hypothetical regional share (81560 workers). That difference was due to the negative total differential shift of –52212 workers and a significant net differential shift of –48378 workers. The positive structural shift amounted to only 2817 employees.

The positive structural shift was impacted decisively by the manufacturing, with 7685 additional employees. However, the considerable negative impact of construction (–8103 workers) must be noted. Again, manufacturing was the greatest contributing factor to the negative total differential shift (–32918 workers).

During this sub-period Slovenia did not specialize in any sector where it might have had the comparative advantages of the Type 4 allocation effect. Type 2 allocation effect sectors were the most numerous, numbering eight of a total of 14 sectors: agriculture, water management, forestry, construction, transport and communication, trade, catering and tourism, and socio-political organizations and communities. Housing activities and education and culture were non-specialized sectors for Slovenia and these were also comparatively inferior (Type 2). The four sectors which this republic did specialize in during this period were, unfortunately, comparatively inferior (Type 1): the manufacturing, artisanship, financial services, and health and social protection.

During the final sub-period (1983–1990) Slovenia again noted a degradation in its real employment shift (including an absolute drop of –6335 workers) in relation to what might have been expected, i.e. the regional share of 48493 workers. That, again, shows the impact of the negative total differential shift of 61365 workers, compared to which the net differential shift (–57935 employees) was slightly less. The structural shift affected the discrepancy to the tune of an increase in the number of workers of 6537.

The positive structural shift owed mostly to manufacturing (showing as many as 21408 more workers), while the high negative total differential shift, again, was also above all due to manufacturing (38110 fewer employees).

Table 1.7 EMPLOYMENT IN SLOVENIA: SHISHA RESULTS

Sector	Real change	Proportional share	Structural shift	Differential shift			
				Total	Net differential shift	Allocation effect	
						Amount	Type
1952–1960							
TOT	157715	185700	-9702	-18283	-34377	16094	-
AGR	6496	10843	4607	-8954	-11625	2671	2
WAT	(882)	0	0	(882)	0	(882)	-
FOR	3668	3565	-3628	3731	9707	-5977	3
MAN	69890	83652	21099	-34861	-25835	-9026	1
CON	12060	19509	-7163	-287	-351	65	2
CRA	20844	9326	11429	89	78	11	4
TRC	4448	13077	-5778	-2851	-3354	503	2
TRD	2091	16137	-11885	-2160	-2358	197	2
TOU	(7506)	0	0	(7506)	0	(7506)	-
HSN	2789	2398	1365	-973	-1025	52	2
FIN	-	-	-	-	-	-	-
EDU	-2995	16688	-17243	-2440	-2865	425	2
HEA	(19442)	0	0	(19442)	0	(19442)	-
SPC	10594	10506	-2505	2593	3251	-658	3
1960–1965							
TOT	94056	97062	-9360	6354	-4017	10371	-
AGR	-6543	5032	-9059	-2515	-4335	1820	2
WAT	416	207	-118	327	497	-170	3
FOR	3145	2013	-1951	3082	4250	-1168	3
MAN	50946	43452	8884	-1390	-1147	-244	1
CON	11078	9140	-1142	3080	3565	-485	3
CRA	-15121	7903	-19943	-3082	-2512	-569	1
TRC	10861	5275	3566	2020	2508	-488	3
TRD	14717	5712	9097	-92	-103	10	2
TOU	5519	1759	3327	433	481	-48	3
HSN	2164	1430	207	528	604	-76	3
FIN	(11608)	0	0	(11608)	0	(11608)	-

EDU	8120	4699	4035	-614	-757	143	2
HEA	5425	4557	2688	-1820	-1580	-240	1
SPC	-8279	5883	-8951	-5211	-5488	277	2
1965–1970							
TOT	24388	25620	3040	-4271	-6932	2660	-
AGR	-3992	752	-4416	-328	-657	329	2
WAT	-263	65	153	-482	-544	62	2
FOR	-3202	592	-3381	-413	-417	4	2
MAN	17452	11915	-950	6487	5350	1137	4
CON	2167	2525	1455	-1813	-1958	145	2
CRA	-1093	938	-1880	-150	-142	-8	1
TRC	-844	1682	539	-3065	-3554	489	2
TRD	7725	1971	4599	1156	1281	-126	3
TOU	1560	657	1293	-389	-415	26	2
HSN	94	417	1089	-1412	-1503	91	2
FIN	1285	585	266	434	460	-26	3
EDU	2872	1420	3479	-2027	-2540	513	2
HEA	1480	1254	2069	-1842	-1706	-136	1
SPC	-853	848	-1274	-427	-585	158	2
1970–1975							
TOT	129501	127638	3378	-1515	-1	-1514	-
AGR	971	2620	-1419	-230	-473	243	2
WAT	435	248	-119	306	505	-199	3
FOR	-450	2045	-1589	-906	-958	52	2
MAN	61515	60825	6399	-5709	-4577	-1132	1
CON	13626	12521	-4000	5105	5691	-586	3
CRA	1858	4196	-2789	451	429	22	4
TRC	3303	7794	-1699	-2793	-3535	742	2
TRD	16347	11220	4308	820	884	-65	3
TOU	4308	3495	2135	-1322	-1445	123	2
HSN	2605	2003	104	498	618	-120	3
FIN	5513	3090	1215	1208	1233	-26	3
EDU	6771	7439	-830	162	215	-54	3
HEA	7521	6314	1575	-368	-364	-4	1
SPC	5178	3827	88	1263	1775	-511	3

1975–1979							
TOT	98116	119086	1435	-22406	-19891	-2515	-
AGR	-887	2141	-1382	-1646	-3461	1815	2
WAT	99	264	140	-305	-400	95	2
FOR	-280	1454	-2055	321	379	-57	3
MAN	30371	56714	-7739	-18604	-15229	-3375	1
CON	6551	11848	5109	-10406	-10731	325	2
CRA	6533	3483	1418	1631	1519	112	4
TRC	6996	6444	-2103	2655	3633	-978	3
TRD	11625	11361	-438	702	750	-48	3
TOU	2920	3398	1208	-1686	-1978	291	2
HSN	509	1972	-224	-1239	-1472	234	2
FIN	10646	3311	5568	1768	1692	76	4
EDU	6474	6801	-2432	2105	2799	-694	3
HEA	9890	6092	2449	1350	1353	-3	3
SPC	6669	3804	1917	948	1256	-308	3
1979–1983							
TOT	32166	81560	2817	-52212	-48378	-3834	-
AGR	1683	1182	597	-96	-226	130	2
WAT	137	168	-17	-14	-22	8	2
FOR	-178	837	-389	-626	-689	63	2
MAN	11855	37088	7685	-32918	-27633	-5284	1
CON	-7905	7770	-8103	-7572	-8691	1119	2
CRA	2655	2779	830	-953	-809	-144	1
TRC	3225	4594	-765	-604	-755	150	2
TRD	646	8024	429	-7807	-8038	231	2
TOU	2830	2340	556	-66	-81	15	2
HSN	2327	1231	136	960	1230	-270	3
FIN	4816	3117	1860	-161	-141	-20	1
EDU	3706	4751	-1814	769	948	-179	3
HEA	5964	4695	2662	-1393	-1317	-76	1
SPC	405	2984	-849	-1731	-2154	424	2
1983–1990							
TOT	-6335	48493	6537	-61365	-57935	-3430	-
AGR	672	777	625	-731	-1630	899	2

WAT	-383	104	-198	-290	-420	130	2
FOR	-1565	467	-855	-1177	-1319	142	2
MAN	5180	21881	21408	-38110	-32887	-5223	1
CON	-13538	3948	-14863	-2623	-3167	544	2
CRA	-5780	1746	-5662	-1865	-1541	-625	1
TRC	372	2818	-677	-1769	-2107	338	2
TRD	-2519	4617	-1210	-5925	-6337	412	2
TOU	423	1508	-404	-682	-791	109	2
HSN	-855	845	-661	-1038	-1165	127	2
FIN	3066	2073	2663	-1670	-1381	-289	1
EDU	3981	2937	902	143	163	-20	3
HEA	6056	3043	8020	-5007	-4580	-426	1
SPC	-1445	1727	-2551	-621	-773	151	2

In this, like the preceding sub-period, Slovenia did not specialize in any comparatively good Type 4 sector. Education and culture was the only sector characterized by the Type 3 allocation effect. Type 2 allocation effect sectors continued to dominate (comparatively inferior, non-specialized): agriculture, water management, forestry, construction, transport and communication, trade, catering and tourism, housing, and socio-political organizations and communities. The manufacturing, artisanship, financial services, and health and social protection were sectors in which the republic specialized in during this period, although they were comparatively inferior (Type 1).

SERBIA

In *Table 1.8*, the shift-share analysis' results for employment in Serbia are systematized. Out of seven analyzed sub-periods, five (1952–1960, 1960–1965, 1965–1970, 1975–1979, and 1983–1990) showed real change greater than the proportional share that would have been realized had employment growth in Serbia equaled the Yugoslav employment growth rate, while in two sub-periods (1970–1975 and 1979–1983) it was the reverse.

In the first sub-period (1952–1960) even the structural shift was negative, while the total differential shift was positive. That means that in this sub-period in Serbia sectors that were slow growth in terms of Yugoslavia as a whole predominated, but also that employment growth caused by regional factors was above the Yugoslav average. In terms of the first parameter, employment in Serbia was less by

56156, and in terms of the second 135666 greater than what regional share would have suggested (421977). The greatest negative structural shift was shown by education and culture (causing the loss of 54514 employees), while the greatest positive differential shift was shown by construction, whose accelerated growth led to the employment of 24265 more workers.

The net differential shift (76919) indicates that accelerated employment growth in Serbia was for the most part due to this particular factor, although the role of the allocation effect should not be overlooked.

During this sub-period in Serbia four sectors (agriculture, trade, education and culture, and socio-political organizations and communities) were characterized by the Type 4 allocation effect. In three sectors (forestry, the manufacturing, and construction) this republic was shown to be comparatively good, but not specialized in (Type 3 allocation effect). No sector was marked by the Type 2 allocation effect. Finally, during this period Serbia specialized in three sectors (artisanship, transport and communication, and housing) in which it was comparatively inferior (allocation Type 1).

Between 1960 and 1965 the positive (although not major) total effect of the two shifts (3195 workers) was the result of the positive total differential shift (44924 workers). When the net differential shift (11615) and allocation effect (33309) are compared, a clear picture emerges of the impact of each of these components on the total differential shift.

Agriculture contributed the most to the negative structural shift (54534 fewer workers), while in the case of the positive differential shift it was manufacturing (27460 more workers).

During this sub-period one more sector (agriculture) emerged that was marked by the Type 4 allocation effect. Two sectors were characterized by the Type 3 allocation effect: manufacturing and health and social protection. Comparatively inferior sectors which this republic did not specialize in (Type 2) predominated: forestry, construction, artisanship, transport and communication, catering and tourism, housing, and socio-political organizations and communities. The least favorable option (Type 1: specialization in comparatively inferior sectors) is seen in the case of water management, trade, and education and culture.

The reason why real change (104038 employed) in the 1965 to 1970 sub-period was greater than hypothetical regional share (67627 employed) is due to the positive total differential shift (440311) which significantly exceeded the structural negative effect (-3900 workers). At the same time, net employment growth (44012 employees) was greater than the total differential shift, which signals that during this sub-period the growth rate in the republic driven by regional factors significantly exceeded the Yugoslav employment growth rate.

Overall, the structural shift was negative mostly due to agriculture, with 33810 fewer employed, while the positive differential shift was driven primarily by construction with an increase of 17024 employees.

During this sub-period, Serbia specialized in only one comparatively good sector, education and culture. Type 3 allocation sectors predominated. There were eight: water management, manufacturing, construction, artisanship, transport and communication, housing, financial services, and health and social protection. Type 2 allocation sectors fell to two (forestry and catering and tourism), and the number of the least favorable Type 1 allocation effect sectors was also reduced to agriculture and trade.

Between 1970 and 1975, i.e. the first period when real change (326293) was less than proportional regional share (346427), the difference should be attributed to the negative total shift (–20372 workers) which exceeded by many times the positive structural shift of only 238 more employed. The positive structural shift was mostly due to manufacturing (13517 employees) and trade (13218), while the negative total differential shift was decisively impacted by manufacturing (–6273).

During this sub-period, there were no sectors which were characterized by the most favorable Type of allocation effect. The Type 3 allocation effect is found in five sectors: forestry, artisanship, transport and communication, financial services, and health and social protection. Manufacturing, catering and tourism, and housing were marked by the Type 2 allocation effect, while agriculture, water management, construction, trade, education and culture, and socio-political organizations and communities were characterized by the least favorable option – specialization in the comparatively inferior Type 1 allocation effect sector.

During the 1975 to 1979 sub-period, real employment change (329375) exceeded by about ten thousand workers hypothetical regional share (318686). That was due to both the positive total differential shift (9228 workers) and the positive structural shift (1462 workers).

Financial services (14646) and construction (13909) were most responsible for the positive structural shift, while construction had the most to do with the positive differential shift (9455 workers).

During this sub-period Serbia specialized in only one comparatively good sector – education and culture, characterized by allocation Type 4. The republic did not specialize in six comparatively good Type 3 sectors: forestry, the manufacturing, construction, transport and communication, trade, and catering and tourism. Two sectors were marked by allocation Type 2 (agriculture and housing), while there were five Type 1 sectors which were not comparatively advantageous (agriculture, trade, financial services, health and social protection, and socio-political organizations and communities) which the republic did specialize in.

During the 1979 to 1983 sub-period, real employment change in Serbia (210413) was lower by fifteen thousand than the hypothetical regional share (225431). That was the result of the negative impact of both shifts – structural and differential.

Construction saw the greatest negative impact, –26286 workers in the structural and –4073 in the differential category.

During this notably crisis ridden sub-period, Serbia specialized in two sectors in which it had comparative advantages (Type 2 allocation effect): trade and health and social protection. Five sectors during this sub-period were marked by the Type 3 allocation effect: water management, forestry, artisanship, transport and communication, and housing. The manufacturing, catering and tourism, and financial services were sectors which Serbia did not specialize in and which were, besides, comparatively inferior (Type 2).

During this sub-period the republic specialized in four comparatively inferior Type 4 sectors: agriculture, construction, education and culture, and socio-political organizations and communities.

In the final period, from 1983 to 1990, real employment change in Serbia (169925 workers) was greater than what would have been hypothetically expected, regional share equaling 141468 workers. That was the result of the impact of the positive total differential shift of 27186 workers, which exceeded the structural shift (1271 workers).

Construction contributed the most to the negative structural shift with 52938 fewer workers, while the high positive total differential shift was mostly due to the manufacturing, with the addition of 22220 employees.

During this sub-period there was an increase to four comparatively good sectors which Serbia specialized in: construction, trade, education and culture, and health and social protection (Type 4 allocation effect). Type 3 allocation effect sectors were: forestry, artisanship, financial services, manufacturing, and housing. There were two comparatively inferior Type 2 sectors which Serbia did not specialize in: agriculture and transport and communication. In this sub-period, agriculture and socio-political communities were sectors which the republic specialized in, although they were comparatively inferior (Type 1).

Table 1.8 EMPLOYMENT IN SERBIA: SHISHA RESULTS

Sector	Real change	Proportional share	Structural shift	Differential shift			
				Total	Net differential shift	Allocation effect	
						Amount	Type
1952–1960							
TOT	501487	421977	-56156	135666	76919	58747	-
AGR	71762	41622	17685	12456	9573	2882	4
WAT	(4172)	0	0	(4172)	0	(4172)	-
FOR	3171	7272	-7400	3299	9562	-6263	3
MAN	187849	131300	33117	23432	25141	-1708	3

CON	53715	46535	-17085	24265	28354	-4089	3
CRA	40653	20655	25313	-5314	-4758	-556	1
TRC	15540	37708	-16662	-5507	-5105	-402	1
TRD	20826	42838	-31552	9540	8912	628	4
TOU	(21304)	0	0	(21304)	0	(21304)	-
HSN	8776	5927	3373	-523	-507	-17	1
FIN	-	-	-	-	-	-	-
EDU	1503	52759	-54514	3258	2749	509	4
HEA	(41743)	0	0	(41743)	0	(41743)	-
SPC	30473	35361	-8430	3542	2998	544	4
1960-1965							
TOT	257293	254098	-41729	44924	11615	33309	-
AGR	-14963	30289	-54534	9282	6956	2325	4
WAT	-1465	978	-558	-1885	-1585	-300	1
FOR	-647	3097	-3000	-744	-1745	1002	2
MAN	131667	86519	17689	27460	29775	-2315	3
CON	12808	27649	-3455	-11387	-11405	19	2
CRA	-27151	16212	-40909	-2454	-2553	99	2
TRC	22233	15846	10713	-4326	-4680	354	2
TRD	46954	18745	29850	-1640	-1456	-184	1
TOU	14054	4993	9442	-381	-390	9	2
HSN	3443	3975	574	-1106	-1191	85	2
FIN	(32429)	0	0	(32429)	0	(32429)	-
EDU	29884	17427	14965	-2508	-2184	-324	1
HEA	16456	9783	5772	901	953	-53	3
SPC	-8409	18586	-28279	1284	1120	164	2
1965-1970							
TOT	104038	67627	-3900	40311	44012	-3701	-
AGR	-29451	5761	-33810	-1402	-968	-434	1
WAT	1979	136	320	1522	2177	-654	3
FOR	-3672	633	-3620	-685	-1708	1023	2
MAN	35317	25248	-2014	12083	12413	-330	3
CON	27418	6593	3801	17024	18581	-1557	3
CRA	-1995	2119	-4248	134	148	-14	3
TRC	15484	4529	1451	9503	10802	-1299	3

TRD	16714	6399	14933	-4618	-4163	-455	1
TOU	3945	1782	3509	-1347	-1397	51	2
HSN	4728	1029	2688	1011	1151	-140	3
FIN	2749	1635	742	372	372	-0	3
EDU	18489	5255	12875	359	321	38	4
HEA	12217	2934	4841	4442	4641	-199	3
SPC	116	3574	-5370	1912	1642	270	4
1970–1975							
TOT	326293	346427	238	-20372	-17620	-2752	-
AGR	6330	20328	-11011	-2987	-2150	-837	1
WAT	60	1123	-539	-524	-519	-5	1
FOR	1579	2131	-1657	1104	3040	-1936	3
MAN	135733	128490	13517	-6273	-6462	189	2
CON	21123	37914	-12113	-4678	-4674	-4	1
CRA	3709	9593	-6376	492	555	-63	3
TRC	19987	25242	-5501	246	261	-15	3
TRD	43311	34426	13218	-4333	-4135	-197	1
TOU	11307	9419	5753	-3865	-4255	390	2
HSN	6198	6023	314	-138	-155	17	2
FIN	13242	8431	3316	1495	1519	-24	3
EDU	25541	29413	-3281	-591	-540	-51	1
HEA	22244	16876	4210	1159	1164	-5	3
SPC	15929	17018	389	-1478	-1267	-211	1
1975–1979							
TOT	329375	318686	1462	9228	12151	-2923	-
AGR	832	16395	-10584	-4979	-3660	-1319	1
WAT	1178	854	451	-126	-137	11	2
FOR	-656	1884	-2662	123	299	-176	3
MAN	110990	120846	-16491	6634	6820	-186	3
CON	55618	32254	13909	9455	9585	-130	3
CRA	14310	7867	3203	3240	3574	-335	3
TRC	18427	22540	-7356	3243	3395	-152	3
TRD	27849	33627	-1297	-4481	-4327	-154	1
TOU	14439	9103	3236	2100	2460	-360	3
HSN	3660	5635	-640	-1335	-1486	151	2

FIN	20861	8709	14646	-2494	-2428	-66	1
EDU	19487	26669	-9535	2353	2136	218	4
HEA	21700	16666	6699	-1666	-1633	-32	1
SPC	20680	15637	7882	-2839	-2448	-391	1
1979–1983							
TOT	210413	225431	-620	-14398	-12314	-2084	-
AGR	11344	9869	4983	-3508	-2732	-776	1
WAT	882	636	-64	310	346	-36	3
FOR	1215	1053	-490	651	1575	-923	3
MAN	99962	83992	17404	-1433	-1468	35	2
CON	-5153	25206	-26286	-4073	-3983	-90	1
CRA	8493	6228	1859	406	425	-19	3
TRC	14218	15422	-2568	1364	1403	-39	3
TRD	24807	23046	1233	528	523	5	4
TOU	6166	6979	1657	-2470	-2815	345	2
HSN	5182	3754	415	1013	1176	-163	3
FIN	8679	7433	4435	-3189	-3232	43	2
EDU	8380	17998	-6873	-2746	-2469	-276	1
HEA	19688	12269	6957	461	461	0	4
SPC	6550	11546	-3284	-1712	-1523	-189	1
1983–1990							
TOT	169925	141468	1271	27186	29323	-2137	-
AGR	9552	6324	5087	-1859	-1487	-372	1
WAT	-766	417	-788	-395	-418	23	2
FOR	1352	676	-1237	1914	4325	-2411	3
MAN	128682	54028	52860	21794	22220	-427	3
CON	-32841	14063	-52938	5034	4978	56	4
CRA	-8479	4072	-13195	644	665	-22	2
TRC	3027	9667	-2322	-4318	-4374	56	2
TRD	13960	14664	-3845	3141	3085	56	4
TOU	-5532	4358	-1166	-8724	-10221	1496	2
HSN	5311	2458	-1925	4777	5373	-596	3
FIN	12066	4771	6131	1164	1220	-56	2
EDU	15298	10780	3309	1210	1098	112	4
HEA	33495	8204	21620	3671	3634	37	4
SPC	-4200	6987	-10320	-867	-778	-89	4

Central Serbia

The results of the shift-share analysis of employment in Central Serbia are presented in *Table 1.9*. During three sub-periods (1960–1965, 1970–1975 and 1979–1983) real change was less than the proportional share that would have been achieved had employment growth in Central Serbia been equal to average Yugoslav employment growth, while in four of the sub-periods (1952–1960, 1965–1970, 1975–1979 and 1983–1990) the situation was the reverse.

During the first sub-period (1952–1960) the structural shift was negative, while the total differential shift was positive. That means that in this sub-period in Central Serbia sectors that were slow growing in Yugoslav terms predominated, but also that employment growth in this region was impacted by specific factors and above the Yugoslav average. In terms of the first category, employment in Central Serbia was smaller to the tune of 47037 workers, and in terms of the second it was higher by about 63970 workers than what regional share would have suggested (278361).

The greatest negative structural shift happened in education and culture (causing the “loss” of 37233 employees), while the greatest positive differential shift was shown by the manufacturing, the accelerated growth of which led to the employment of 21233 more workers.

During this sub-period in Central Serbia there were five sectors that were characterized by the Type 4 allocation effect: agriculture, construction, trade, education and culture, and socio-political organizations and communities. There were only two Type 3 allocation sectors: forestry and the manufacturing. There were no Type 2 allocation effect sectors. During this period Central Serbia specialized in three sectors – artisanship, transport and communication, and housing, which were comparatively inferior (allocation effect Type 1).

Between 1960 and 1975 the negative total effect of the two shifts was the result of the predominant negative impact of unfavorable structure (6209 fewer employed), while the total differential shift was positive (4493 workers). However, the net differential shift (–23532) indicates that in the hypothetical average employment structure in Central Serbia the negative consequences of the slower growth of regional employment could still be felt.

Artisanship had the greatest impact on the negative structural shift (27392 fewer employed), while manufacturing was the greatest contributing factor to the positive total differential shift (an increase of 7690 workers).

In this sub-period there was only one Type 4 allocation effect sector: catering and tourism. Two sectors were characterized by the Type 3 allocation effect: water management and the manufacturing. Agriculture, forestry, and housing were comparatively inferior sectors which the republic did not specialize in (Type 2). The worst option (specialization in comparatively inferior Type 1 sectors) was noted in seven categories: construction, artisanship, transport and communication, trade,

education and culture, health and social protection, and socio-political organizations and communities.

The fact that real change (118480 employees) in the 1965 to 1970 sub-period was almost three times greater than hypothetical regional share (42208 employees) was due to the positive structural (13627) and positive total differential shift (62645).

The factors that contributed the most to the total positive structural shift were trade and education and culture, with 9726 and 8737 more employees respectively, while the most significant cause of the positive differential shift were manufacturing and construction, with 22920 and 17458 more employees, respectively.

During this sub-period Central Serbia specialized in six comparatively good sectors: the manufacturing, trade, catering and tourism, financial services, health and social protection, and socio-political organizations and communities. The same number of sectors was marked by the Type 3 allocation effect: agriculture, water management, forestry, construction, artisanship, transport and communication, and housing. There were no Type 2 allocation effect sectors, while there was only one sector characterized by the most unfavorable, Type 1 allocation effect option – education and culture.

During the following sub-period (1970–1975) proportional regional share (229048) was greater than real change (212674). The difference was due to the negative total differential shift which greatly exceeded (by –21473 workers) the positive structural shift (5100 employees).

Manufacturing affected the negative total shift (–10648 employees) the most, while manufacturing and trade, with 9253 and 8999 more workers, respectively, were the major causes of the positive structural shift.

During this sub-period, the number of sectors characterized by the most favorable Type of allocation effect was reduced from six to one: financial services. The Type 3 allocation effect was evident in five sectors: in water management, forestry, artisanship, transport and communication, and health and social protection. Agriculture and housing were marked by the Type 2 allocation effect, while the manufacturing, construction, trade, catering and tourism, education and culture, and socio-political organizations and communities were categorized within the least favorable option: specialization in the comparatively inferior Type 1 allocation effect sector.

During the 1975 to 1979 sub-period, real employment change (232994) was 22739 less than hypothetical regional share (210155). Contributing to that were the positive total differential shift (15795 workers), above all in its “pure” form (18249 employees), as well as the positive structural shift which resulted in a 7044 increase in potential employment growth.

The biggest contribution to positive structural growth were financial services (10975) and construction (9645). Construction was the greatest factor in the positive differential shift, with 10752 workers.

During this period Central Serbia specialized in four comparatively good sectors: construction, transport and communication, education and culture, and socio-political organizations and communities, all characterized by the Type 4 allocation effect. This region did not specialize in seven comparatively good Type 3 sectors: agriculture, water management, the manufacturing, artisanship, catering and tourism, and housing. There were no Type 2 allocation effect sectors, while there were three – trade, financial services, and socio-political organizations and communities – which were not comparatively advantageous but which the republic did specialize in (Type 1).

During the 1979 to 1983 sub-period, employment change (136532) in Central Serbia was less than hypothetical regional share (150353). The 13711 workers difference was caused by the negative structural shift (–2580 workers).

Construction (–18695 workers) had the greatest impact on the negative structural shift. Construction also had the greatest impact on the negative total differential shift (5171 fewer workers).

During this sub-period, Central Serbia specialized in two sectors in which it had comparative Type 4 allocation effect advantages: transport and communication and health and social protection. There were four Type 3 allocation effect sectors in this period: agriculture, water management, forestry, and housing. Manufacturing, artisanship, and catering and tourism were sectors which Central Serbia did not specialize in and they were, besides, comparatively inferior (Type 2). There were five specialization sectors in this period which were comparatively bad (Type 1): construction, trade, financial services, education and culture, and socio-political organizations and communities.

During the final sub-period (1983–1990) Central Serbia noted greater real employment change (130562 workers) than would have been expected with a regional share of 94120 workers. That was the result of the impact of the positive total differential shift (38495 workers), which the net differential shift of 40360 employees almost equaled. The structural shift affected the cited difference with a „reduction” of 2054 workers.

Construction gave the greatest contribution to the negative structural shift, with as many as 37129 fewer employees, while the high positive total differential shift was primarily due to the manufacturing, with 21967 more employees.

During this sub-period Central Serbia specialized in three comparatively good sectors: construction, education and culture, health and social protection (Type 4 allocation effect). There were four Type 3 allocation effect sectors: agriculture, forestry, trade, financial services, and housing. There was an increase in comparatively inferior, non-specialized Type 2 sectors: water management, artisanship, and catering and tourism. Transport and communication and socio-political organizations and communities were specialization sectors for the republic in this period, although they were comparatively inferior (Type 1).

Table 1.9 EMPLOYMENT IN CENTRAL SERBIA: SHISHA RESULTS

Sector	Real change	Proportional share	Structural shift	Differential shift			
				Total	Net differential shift	Allocation effect	
						Amount	Type
1952–1960							
TOT	295294	278361	-47037	63970	19223	44747	-
AGR	13596	16334	6940	-9678	-12503	2825	4
WAT	(1083)	0	0	(1083)	0	(1083)	-
FOR	554	4951	-5038	641	1800	-1159	3
MAN	130241	87052	21956	21233	22666	-1433	3
CON	27660	37629	-13815	3846	3666	180	4
CRA	28012	13257	16246	-1491	-1372	-119	1
TRC	10593	26476	-11699	-4185	-3645	-540	1
TRD	14047	28429	-20939	6557	6089	468	4
TOU	(14517)	0	0	(14517)	0	(14517)	-
HSN	5401	4047	2303	-949	-887	-61	1
FIN	-	-	-	-	-	-	-
EDU	27	36035	-37233	1225	999	227	4
HEA	(28221)	0	0	(28221)	0	(28221)	-
SPC	21342	24152	-5758	2948	2410	538	4
1960–1965							
TOT	157578	159294	-6209	4493	-23532	28026	-
AGR	-12243	8473	-15254	-5461	-9173	3712	2
WAT	198	254	-145	89	181	-92	3
FOR	-1129	1732	-1678	-1183	-3112	1929	2
MAN	78388	58697	12000	7690	7706	-15	3
CON	9333	18661	-2332	-6996	-6509	-487	1
CRA	-19555	10855	-27392	-3019	-2940	-78	1
TRC	12081	11051	7472	-6442	-6265	-177	1
TRD	29370	12493	19894	-3016	-2519	-497	1
TOU	10173	3402	6434	337	317	19	4
HSN	2937	2575	372	-11	-11	0	2
FIN	(23870)	0	0	(23870)	0	(23870)	-

EDU	20955	11668	10020	-734	-598	-136	1
HEA	9944	6614	3902	-573	-562	-10	1
SPC	-6744	12818	-19503	-59	-47	-12	1
1965–1970							
TOT	118480	42208	13627	62645	68558	-5913	-
AGR	-2259	1205	-7074	3609	7432	-3823	3
WAT	672	65	151	456	860	-404	3
FOR	-911	316	-1804	577	1802	-1224	3
MAN	38175	16577	-1322	22920	22382	538	4
CON	24527	4484	2585	17458	17484	-26	3
CRA	1180	1349	-2705	2536	2743	-207	3
TRC	13540	2986	957	9597	10326	-730	3
TRD	15128	4168	9726	1234	1066	168	4
TOU	4216	1245	2451	521	483	38	4
HSN	4359	702	1835	1822	1896	-74	3
FIN	2728	1203	546	978	830	148	4
EDU	10098	3566	8737	-2205	-1813	-392	1
HEA	7951	1924	3175	2852	2836	16	4
SPC	-924	2417	-3632	290	230	60	4
1970–1975							
TOT	212674	229048	5100	-21473	-18458	-3015	-
AGR	2230	5188	-2810	-148	-276	128	2
WAT	374	468	-224	130	205	-74	3
FOR	1111	1282	-997	825	2497	-1672	3
MAN	86561	87957	9253	-10648	-10595	-54	1
CON	10862	27197	-8689	-7646	-7041	-604	1
CRA	3769	6697	-4451	1523	1628	-105	3
TRC	14724	17441	-3801	1084	1101	-16	3
TRD	29449	23439	8999	-2989	-2770	-218	1
TOU	9212	6927	4231	-1947	-1926	-20	1
HSN	4223	4382	228	-387	-394	7	2
FIN	9687	6374	2507	805	715	90	4
EDU	14895	19374	-2161	-2317	-2127	-191	1
HEA	15832	11052	2757	2023	2051	-28	3
SPC	9745	11270	258	-1783	-1526	-257	1

1975–1979							
TOT	232994	210155	7044	15795	18249	-2454	-
AGR	2811	4295	-2773	1289	2384	-1096	3
WAT	1013	419	221	374	546	-173	3
FOR	100	1162	-1643	580	1511	-930	3
MAN	75342	81582	-11133	4893	4914	-21	3
CON	42762	22365	9645	10752	10366	386	4
CRA	8428	5704	2323	402	403	-1	3
TRC	11188	15738	-5136	586	580	7	4
TRD	20971	22888	-883	-1034	-967	-67	1
TOU	9413	6856	2437	119	123	-3	3
HSN	3988	4048	-460	400	408	-9	3
FIN	13702	6526	10976	-3800	-3255	-545	1
EDU	12347	17219	-6157	1284	1190	94	4
HEA	16552	11142	4479	931	900	31	4
SPC	14377	10211	5147	-981	-854	-127	1
1979–1983							
TOT	136532	150353	-2580	-11241	-8061	-3180	-
AGR	6413	2863	1446	2104	3766	-1662	3
WAT	508	358	-36	186	245	-59	3
FOR	762	704	-327	385	929	-544	3
MAN	67981	56746	11758	-523	-529	6	2
CON	-5939	17928	-18696	-5171	-4742	-429	1
CRA	5344	4307	1286	-248	-251	2	2
TRC	9372	10588	-1763	547	547	0	4
TRD	16442	15902	851	-311	-298	-13	1
TOU	5076	5099	1211	-1235	-1284	50	2
HSN	3240	2843	315	83	85	-2	3
FIN	5253	5363	3200	-3310	-3101	-209	1
EDU	4371	11596	-4428	-2797	-2604	-193	1
HEA	13602	8422	4776	404	393	12	4
SPC	4107	7633	-2171	-1355	-1216	-139	1
1983–1990							
TOT	130562	94120	-2054	38495	40360	-1865	-
AGR	5182	2026	1630	1526	2536	-1010	3

WAT	-915	236	-446	-705	-878	173	2
FOR	1258	448	-821	1631	3694	-2063	3
MAN	94236	36530	35740	21967	22039	-72	3
CON	-18613	9863	-37129	8653	8116	537	4
CRA	-6309	2784	-9019	-73	-74	1	2
TRC	3019	6613	-1589	-2006	-1976	-30	1
TRD	9219	10077	-2642	1784	1696	88	1
TOU	-2902	3220	-861	-5260	-5550	290	2
HSN	4470	1820	-1425	4075	4119	-44	3
FIN	8209	3381	4344	484	477	8	1
EDU	12705	6882	2112	3711	3509	201	4
HEA	24229	5637	14855	3737	3583	155	4
SPC	-3226	4606	-6802	-1029	-932	-98	1

Kosovo and Metohia

Table 1.10 presents the findings of the shift-share analysis of employment in Kosovo and Metohia. In all of the sub-periods real change was greater than proportional share which would have been achieved had employment growth in this region been equal to the Yugoslav average. The difference in all sub-periods was due to the greater positive total differential shift relative to the negative structural shift.

During the first sub-period (1952–1960) the total differential shift (11791) was greater than the structural shift (–4661) to the tune of 7021 workers, i.e. real change (33633) was by that much greater than what regional share would have suggested (26502 workers).

The greatest negative structural shift was shown by education and culture (causing the “loss” of 4088 employees), while construction saw the greatest positive differential shift with 8730 more workers employed because of its accelerated growth. During this sub-period in Kosovo and Metohia there were three Type 4 allocation effect sectors: housing, education and culture, and socio-political organizations and communities. In three sectors (agriculture, forestry, and construction) this region achieved comparatively good results, but was not specialized in them (Type 3 allocation effect). There were three Type 2 allocation effect sectors, i.e. sectors that were comparatively inferior but which Kosovo and Metohia did not specialize in. These were artisanship, transport and communication, and trade.

Kosovo and Metohia specialized in this sub-period in one sector (the manufacturing), which was comparatively bad (allocation Type 1).

Between 1960 and 1965 the positive total effect of the two shifts was 1317 workers. That was the result of the impact of unfavorable structure (2441 fewer workers) and a positive total differential shift of 3759 workers.

Agriculture had the most to do with the negative structural shift, with 3098 fewer employed, while manufacturing had the greatest impact on the positive total differential shift, with 3168 fewer employed.

During this sub-period there were four sectors which were marked by the Type 4 allocation effect. These were agriculture, housing, education and culture, and socio-political organizations and communities. Type 3 allocation effect sectors predominated in the manufacturing, artisanship, transport and communication, trade, catering and tourism, and health and social protection. Forestry was a comparatively inferior sector which the region was not specialized in (Type 2). The least favorable option (Type 1 specialization in comparatively bad sectors) is seen only in water management and construction.

The fact that real change (7655 employed) during the 1965 to 1970 period was greater by 3118 workers than hypothetical regional share (4437 employed) was due to the negative structural shift of -289 and the positive total differential shift of 3501 employees. Of the latter, the most is attributable to the net differential shift (2797 more employed).

The fact that the structural shift is negative overall is for the most part due to agriculture, with 2297 fewer employed, while education and culture made the greatest contribution to the positive differential shift with 2785 more employees.

During this sub-period the province of Kosovo and Metohia specialized in two comparatively good sectors, education and culture, and socio-political organizations and communities. There were five Type 3 allocation effect sectors: forestry, manufacturing, transport and communication, education and culture, and health and social protection. Type 2 allocation effect sectors increased to five: water management, artisanship, trade, catering and tourism, and financial services. The number of sectors characterized by the most unfavorable option (Type 1 allocation effect) also increased, to include agriculture, construction, and housing.

During the 1970 to 1975 sub-period, when real change (38748) exceeded proportional regional share (22926) by 15712 employees, the difference was attributable to the positive total differential shift of 16216 workers and the negative structural shift of 394 workers.

Manufacturing had most to do with the total differential shift, with 5277 employees, while the negative structural shift was decisively influenced by agriculture (-732) and construction (-704).

During this sub-period the number of the most advantageous sectors (Type 4) increased by one, in education and culture, health and social protection, and socio-political organizations and communities. The Type 3 allocation effect was evident in ten

sectors: water management, forestry, artisanship, transport and communication, trade, catering and tourism, housing, and financial services. There were no Type 2 allocation effect sectors in this sub-period, while agriculture was situated within the least favorable option – specialization in a comparatively inferior sector (Type 1 allocation effect).

During the 1975 to 1979 sub-period real employment change (29436) was less by 5250 workers than hypothetical regional share (24176 employed). Contributing to that was the positive total differential shift of 6133 workers, above all its “pure” component of 7318 employees. The negative structural shift reduced potential employment growth by 872 workers.

The most significant factors in the negative structural shift were education and culture (–1368), while construction contributed the most to the positive differential shift (1723 workers).

During this sub-period the region specialized in three comparatively good sectors: agriculture, construction, and education and culture, all of which were characterized by allocation effect Type 4. The province did not specialize in seven comparatively good Type 3 sectors: water management, the manufacturing, artisanship, transport and communication, trade, catering and tourism, and financial services. There were two Type 2 allocation sectors: forestry and health and social protection. The number of sectors which were not comparatively favorable, but which the province did specialize in (Type 1) increased by one in relation to the preceding period. These sectors were housing and socio-political organizations and communities.

During the 1979 to 1983 sub-period real employment change (30129) in Kosovo and Metohia considerably exceeded hypothetical regional share (17579). The 12540 workers difference was caused by the positive total differential shift (13681 workers), and to an even greater degree by the net (14598 workers) differential shift in relation to the negative structural shift of only 1131 employees.

Construction had considerable influence on the negative structural shift (–2218 workers). manufacturing had the most to do with the positive differential shift of 4868 workers.

During this sub-period the province of Kosovo and Metohia specialized in four sectors in which it had comparative advantages (Type 4 allocation effect): agriculture, construction, education and culture, and socio-political organizations and communities. There were seven Type 3 allocation effect sectors out of a total of fourteen: the manufacturing, artisanship, transport and communication, trade, housing, financial services, and health and social protection. Water management, forestry, and catering and tourism were non-specialization sectors in the province and they were also comparatively inferior (Type 2). There were no Type 1 allocation effect sectors during this period.

In the final sub-period (1983–1990) Kosovo and Metohia again achieved real employment change (14645 workers) in excess of what would have been expected with a regional share of 11871 workers. The 2764 worker difference was the result

of the positive total differential shift of 3499 workers and the structural shift which affected the difference with a reduction of about 725 workers.

Construction had the most to do with the negative structural shift (with 4920 fewer employees), while the high positive total differential shift was due chiefly to manufacturing (with 4029 more employed).

During this sub-period the province specialized in two comparatively good sectors: agriculture and socio-political organizations and communities (Type 4 allocation effect). Type 3 allocation effect sectors continued to prevail: water management, forestry, manufacturing, artisanship, trade, housing, and health and social protection. There were also four comparatively inferior, non-specialized Type 2 sectors: catering and tourism, transport and communication, financial services, and housing. There were no Type 1 allocation effect sectors in this sub-period.

Table 1.10 EMPLOYMENT IN KOSOVO AND METOHIA: SHISHA RESULTS

Sector	Real change	Proportional share	Structural shift	Differential shift			
				Total	Net differential shift κ	Allocation effect	
						Amount	Type
1952–1960							
TOT	33633	26502	-4661	11791	7757	4034	-
AGR	4704	1910	811	1983	2086	-103	3
WAT	(312)	0	0	(312)	0	(312)	-
FOR	428	1033	-1051	446	572	-126	3
MAN	8069	8919	2250	-3099	-3075	-25	1
CON	10630	3002	-1102	8730	9933	-1203	3
CRA	702	947	1161	-1406	-1724	318	2
TRC	-46	1414	-625	-835	-1297	462	2
TRD	440	2224	-1638	-146	-165	19	2
TOU	(1148)	0	0	(1148)	0	(1148)	-
HSN	720	446	254	20	16	4	4
FIN	-	-	-	-	-	-	-
EDU	1474	3957	-4088	1606	1135	471	4
HEA	(2644)	0	0	(2644)	0	(2644)	-
SPC	2408	2652	-632	388	275	113	4
1960–1965							
TOT	17777	16460	-2441	3759	10920	-7161	-

AGR	422	1720	-3098	1799	1538	261	4
WAT	-139	73	-42	-170	-124	-46	1
FOR	-260	435	-421	-274	-296	23	2
MAN	8922	4778	977	3168	4029	-862	3
CON	-5159	3463	-433	-8189	-4243	-3947	1
CRA	-81	471	-1189	637	1477	-840	3
TRC	3000	447	302	2251	5597	-3345	3
TRD	2973	823	1310	840	1100	-260	3
TOU	943	269	509	165	203	-38	3
HSN	723	313	45	365	323	42	4
FIN	(1268)	0	0	(1268)	0	(1268)	-
EDU	3757	1626	1396	735	444	291	4
HEA	1020	620	366	35	38	-3	3
SPC	388	1423	-2165	1130	834	295	4
1965–1970							
TOT	7655	4437	-282	3501	2797	704	-
AGR	-2121	391	-2297	-216	-144	-72	1
WAT	-5	9	20	-34	-50	16	2
FOR	-190	80	-459	189	243	-55	3
MAN	3946	1477	-118	2586	2979	-392	3
CON	-424	485	279	-1188	-1157	-31	1
CRA	-200	97	-195	-102	-161	59	2
TRC	354	247	79	27	37	-10	3
TRD	758	327	763	-332	-384	52	2
TOU	71	105	208	-242	-278	37	2
HSN	-307	104	271	-682	-505	-177	1
FIN	-19	64	29	-112	-188	76	2
EDU	4645	539	1321	2785	1592	1193	4
HEA	1138	185	305	649	706	-58	3
SPC	9	326	-489	173	107	66	4
1970–1975							
TOT	38748	22926	-394	16216	17465	-1249	-
AGR	-20	1352	-732	-640	-458	-182	1
WAT	141	40	-19	120	219	-99	3
FOR	380	336	-261	305	352	-47	3

MAN	14085	7969	838	5277	5801	-523	3
CON	5205	2203	-704	3706	4217	-511	3
CRA	527	414	-275	388	671	-283	3
TRC	2223	1261	-275	1237	1739	-502	3
TRD	3651	1736	666	1249	1565	-316	3
TOU	1110	518	316	275	365	-89	3
HSN	1033	420	22	591	629	-38	3
FIN	626	299	118	209	396	-187	3
EDU	5934	3676	-410	2668	1291	1376	4
HEA	1896	1151	287	458	446	12	4
SPC	1957	1550	35	372	232	140	4
1975-1979							
TOT	29436	24176	-872	6133	7318	-1185	-
AGR	1102	1011	-653	744	672	71	4
WAT	199	56	29	114	145	-30	3
FOR	-227	321	-454	-94	-102	8	2
MAN	7928	8514	-1162	575	637	-62	3
CON	5429	2590	1117	1723	1650	73	4
CRA	1436	406	165	865	1404	-539	3
TRC	1472	1346	-439	565	752	-187	3
TRD	2509	1959	-76	625	786	-161	3
TOU	1118	589	209	320	440	-120	3
HSN	-229	501	-57	-673	-639	-34	1
FIN	1600	337	567	696	1326	-631	3
EDU	3474	3826	-1368	1016	487	528	4
HEA	1665	1205	484	-24	-25	1	2
SPC	1960	1515	764	-319	-215	-104	1
1979-1983							
TOT	30129	17579	-1131	13681	14598	-917	-
AGR	1409	721	364	323	269	55	4
WAT	-62	55	-5	-111	-113	2	2
FOR	85	167	-78	-4	-5	1	2
MAN	12026	5929	1229	4868	5509	-641	3
CON	1531	2127	-2218	1622	1466	156	4
CRA	528	396	118	14	17	-4	3

TRC	2230	961	-160	1429	1840	-411	3
TRD	3880	1438	77	2365	2929	-564	3
TOU	540	471	112	-43	-56	14	2
HSN	750	274	30	445	552	-107	3
FIN	667	373	222	72	113	-41	3
EDU	2615	2655	-1014	974	463	511	4
HEA	2480	897	509	1074	1145	-71	3
SPC	1450	1114	-317	653	469	184	4
1983–1990							
TOT	14645	11871	-725	3499	4645	-1146	-
AGR	2522	498	400	1624	1385	239	4
WAT	220	27	-52	244	331	-87	3
FOR	38	101	-184	122	155	-33	3
MAN	11914	4118	4029	3767	4228	-461	3
CON	-7616	1307	-4920	-4003	-3574	-429	4
CRA	-260	258	-837	319	436	-117	3
TRC	48	685	-164	-472	-567	95	3
TRD	3845	1058	-277	3065	3502	-438	3
TOU	-334	302	-81	-555	-788	233	2
HSN	103	202	-158	59	68	-9	2
FIN	61	254	326	-518	-858	340	3
EDU	958	1675	514	-1231	-603	-627	4
HEA	2897	664	1749	485	498	-13	3
SPC	249	724	-1070	595	432	163	4

Vojvodina

Table 1.11 shows the results of the shift-share analysis of employment in Vojvodina. In the two initial periods (1952–1960 and 1960–1965) real change was greater than the proportional share that would have been achieved had employment growth in Vojvodina been equal to the average Yugoslav rate of growth, while in all other sub-periods (1965–1970, 1970–1975, 1975–1979, 1979–1983 and 1983–1990) it was the reverse.

During the first sub-period (1952–1960) the structural shift was negative, while the total differential shift was positive. That means that during this sub-period

in Vojvodina slow growth sectors in terms of Yugoslavia as a whole predominated, but that employment growth in this region that was linked to specific factors exceeded the Yugoslav average. In terms of the first criterion, employment in Vojvodina was less to the tune of 4458 workers, and in terms of the second it was 59905 workers in excess of what regional share would suggest (117114).

In addition, the greatest single structural shift was shown by education and culture (which suffered a “loss” of 13192 employed), while the greatest positive differential shift was shown by agriculture, due to the accelerated growth of which there were 20150 more employed.

In Vojvodina during this sub-period there were four Type 4 allocation effect factors: agriculture, trade, education and culture, and socio-political organizations and communities. In four sectors (forestry, the manufacturing, construction, and housing) the province was comparatively good, but not specialized (Type 3 allocation effect). There was not a single Type 2 allocation effect sector, while in this sub-period Vojvodina specialized in two sectors (artisanship and transport and communication) in which it was comparatively inferior (allocation effect Type 1).

Between 1960 and 1965 the positive total effect of the two shifts was the result of the predominant positive influence of the total differential shift (36672 workers) in relation to the negative impact of structure (–33079 workers).

Agriculture had the most to do with the negative structural shift (36181 fewer employed), while manufacturing had a large impact on the positive total differential shift (16602 more employed).

During this sub-period there were two Type 4 allocation effect sectors: agriculture and trade. The five Type 3 allocation effect sectors were: forestry, manufacturing, construction, health and social protection, and socio-political organizations and communities. Artisanship, transport and communication, catering and tourism, housing, and education and culture were comparatively inferior sectors in which the province did not specialize in (Type 2). The worst option (Type 1, specialization in comparatively inferior sectors) applied only to water management.

The fact that real change (an absolute decline of 22079 in the number of employed) during the 1965 to 1970 sub-period was less than hypothetical regional share (20987 employed) is due to both the negative structural (–4468) and negative total differential shifts (–15115). The latter is for the most part attributable to the net differential shift (14987 fewer employed).

The fact that, in sum, the structural shift was negative was mostly due to agriculture with 24440 fewer employed, while the negative differential shift was due mostly to manufacturing (13423 fewer employed).

During this sub-period Vojvodina specialized in only one comparatively good sector, water management. There were three Type 3 allocation effect sectors: construction, health and social protection, and socio-political organizations and communities. Type 2 allocation effect sectors predominated: forestry, the manufacturing, artisanship, transport and communication, catering and tourism, housing,

financial services, and education and culture. The number of Type 1 allocation effect sectors, the least favorable, increased by one: agriculture and trade.

During the 1970–1975 sub-period, when real change (74871) was less by 19582 workers than proportional regional share (94453), the difference is attributable to both the negative total differential shift (–15115 workers) and the negative structural shift (–4468 employed). Of the total differential shift, almost 100% is attributable to the net differential shift (–14987 employed).

Trade had the most to do with the negative total differential shift (–2593 employed) while agriculture was the key factor in the negative structural shift (–7468 workers).

During this period there was not a single most favorable allocation effect sector. The Type 3 allocation effect is noted in only one sector: financial services. The Type 2 allocation effect characterized the majority of sectors: forestry, the manufacturing, construction, artisanship, transport and communication, catering and tourism, housing, and education and culture. The least favorable, Type 1 allocation effect option, was found in agriculture, water management, trade, health and social protection, and socio-political organizations and communities.

During the 1975–1979 sub-period real employment change (66945) was 17410 workers less than hypothetical regional share (84355). Contributing to that were the negative total differential shift (–12700 workers) and the negative structural shift which reduced potential employment growth by 4710 workers.

Agriculture had the most to do with the negative structural shift (–7159 workers), while the negative differential shift was due mostly to manufacturing (–7011 workers).

In this sub-period Vojvodina did not specialize in any comparatively good sector. There were six of these non-specialized Type 3 sectors: manufacturing, artisanship, transport and communication, catering and tourism, financial services, and education and culture. There were four allocation Type 2 sectors: forestry, construction, housing, and health and social protection. The number of sectors which were not comparatively advantageous but which the province did specialize in (Type 1) remained constant in relation to the preceding period. These sectors were: agriculture, water management, trade, and socio-political organizations and communities.

During the 1979 to 1983 sub-period real employment change (43752) in Vojvodina was less by about 13737 workers than hypothetical regional share (57499). The difference was caused by an increased negative total differential shift (–16838) in relation to the structural shift which amounted to 3090 employees. Agriculture had the most to do with the positive structural shift (–16838), while the greatest impact on the negative differential shift was made by agriculture (–5935) and manufacturing (–5778 workers).

During this sub-period Vojvodina specialized in a single sector (water management) in which it had comparative advantages (Type 4 allocation effect). There

were four sectors in this sub-period marked by the Type 3 allocation effect: forestry, artisanship, housing, and financial services. The manufacturing, construction, transport and communication, trade, catering and tourism, education and culture, and financial services were non-specialization and comparatively inferior Type 2 sectors. There were two specialization sectors during this period which were comparatively inferior (Type 1) – agriculture and socio-political organizations and communities.

During the final sub-period (1983–1990) Vojvodina showed a significant deterioration in real employment change (24724) in relation to what might have been expected (regional share was 35477 workers). The difference of 10743 workers was the result of the impact of the negative total differential shift (–14803 workers) to which the net differential shift (–12488 employed) was almost equal. It was also due to the positive, but significantly lower, structural shift amounting to an increase of 4050 workers.

manufacturing had the most to do with the positive structural shift, with 13091 more employed, while the high negative total differential shift was due to agriculture, with 5009 fewer employed.

During this sub-period Vojvodina specialized in one comparatively good sector: water management. There were four Type 3 allocation effect sectors: forestry, artisanship, construction, housing, and financial services. The number of comparatively unfavorable, non-specialized Type 2 sectors remained unchanged in relation to the preceding period. These were: the manufacturing, transport and communication, trade, catering and tourism, education and culture, and health and social protection. Agriculture and socio-political organizations and communities were specialization sectors for the province during this period, although they were comparatively inferior (Type 1).

Table 1.11 EMPLOYMENT IN VOJVODINA: SHISHA RESULTS

Sector	Real change	Proportional share	Structural shift	Differential shift			
				Total	Net differential shift	Allocation effect	
						Amount	Type
1952–1960							
TOT	172560	117114	-4458	59905	54946	4959	-
AGR	53462	23378	9933	20150	7652	12498	4
WAT	(2777)	0	0	(2777)	0	(2777)	-
FOR	2189	1288	-1311	2212	10043	-7832	3
MAN	49539	35329	8911	5299	5864	-565	3
CON	15425	5904	-2168	11689	29877	-18189	3

CRA	11939	6451	7906	-2418	-1923	-494	1
TRC	4993	9818	-4338	-487	-481	-6	1
TRD	6339	12185	-8975	3129	2852	277	4
TOU	(5639)	0	0	(5639)	0	(5639)	-
HSN	2655	1434	816	405	450	-45	3
FIN	-	-	-	-	-	-	-
EDU	2	12768	-13192	427	413	14	4
HEA	(10878)	0	0	(10878)	0	(10878)	-
SPC	6723	8558	-2040	206	200	6	4
1960–1965							
TOT	81938	78344	-33079	36672	28876	7796	-
AGR	-3142	20096	-36181	12944	4508	8436	4
WAT	-1524	651	-372	-1803	-702	-1101	1
FOR	742	930	-901	713	1718	-1005	3
MAN	44357	23044	4711	16602	20838	-4237	3
CON	8634	5526	-690	3799	5870	-2071	3
CRA	-7515	4886	-12329	-72	-77	5	2
TRC	7152	4348	2939	-135	-164	29	2
TRD	14611	5429	8645	536	507	29	4
TOU	2938	1322	2499	-883	-1053	170	2
HSN	-217	1086	157	-1460	-1774	314	2
FIN	(7291)	0	0	(7291)	0	(7291)	-
EDU	5172	4133	3549	-2509	-2841	332	2
HEA	5492	2549	1504	1438	1802	-363	3
SPC	-2053	4345	-6611	213	245	-32	3
1965–1970							
TOT	-22097	20983	-17244	-25835	-25745	-90	-
AGR	-25071	4164	-24440	-4796	-1421	-3375	1
WAT	1312	63	148	1101	1055	46	4
FOR	-2571	237	-1357	-1452	-2994	1543	2
MAN	-6804	7193	-574	-13423	-15018	1595	2
CON	3315	1624	936	755	1038	-283	3
CRA	-2975	672	-1348	-2299	-2482	183	2

TRC	1590	1296	415	-121	-149	28	2
TRD	828	1904	4444	-5520	-5188	-332	1
TOU	-342	432	851	-1626	-2157	532	2
HSN	676	223	582	-129	-210	81	2
FIN	40	368	167	-494	-683	188	2
EDU	3746	1150	2817	-220	-279	59	2
HEA	3128	825	1362	941	1085	-144	3
SPC	1031	831	-1249	1449	1660	-211	3
1970-1975							
TOT	74871	94453	-4468	-15115	-14987	-128	-
AGR	4120	13788	-7468	-2199	-636	-1563	1
WAT	-455	615	-295	-775	-382	-393	1
FOR	88	513	-398	-26	-82	56	2
MAN	35087	32564	3426	-903	-1000	98	2
CON	5056	8514	-2720	-738	-895	157	2
CRA	-587	2482	-1650	-1419	-1688	269	2
TRC	3040	6541	-1426	-2075	-2317	241	2
TRD	10211	9252	3552	-2593	-2511	-82	1
TOU	985	1974	1205	-2194	-3143	949	2
HSN	942	1221	64	-342	-516	174	2
FIN	2929	1757	691	481	639	-158	3
EDU	4712	6363	-710	-941	-1085	143	2
HEA	4516	4673	1166	-1322	-1308	-15	1
SPC	4227	4198	96	-67	-64	-4	1
1975-1979							
TOT	66945	84355	-4710	-12700	-6838	-5863	-
AGR	-3081	11089	-7159	-7011	-2017	-4995	1
WAT	-34	380	200	-614	-397	-216	1
FOR	-529	401	-566	-363	-1102	738	2
MAN	27720	30750	-4196	1166	1247	-81	3
CON	7427	7299	3148	-3020	-3581	561	2
CRA	4446	1757	716	1973	2580	-606	3
TRC	5767	5456	-1781	2092	2395	-303	3
TRD	4369	8780	-339	-4072	-3987	-86	1
TOU	3908	1658	590	1660	2826	-1166	3
HSN	-99	1086	-123	-1061	-1623	562	2

FIN	5559	1845	3104	610	742	-132	3
EDU	3666	5623	-2010	53	61	-7	3
HEA	3483	4319	1736	-2573	-2576	4	2
SPC	4343	3911	1971	-1540	-1405	-135	1
1979–1983							
TOT	43752	57499	3090	-16838	-12641	-4197	-
AGR	3522	6284	3173	-5935	-1851	-4083	1
WAT	436	223	-22	236	191	44	4
FOR	368	182	-85	271	964	-694	3
MAN	19955	21316	4417	-5778	-5950	172	2
CON	-745	5151	-5372	-524	-640	116	2
CRA	2621	1525	455	640	698	-58	3
TRC	2616	3873	-645	-612	-639	27	2
TRD	4485	5706	305	-1526	-1558	32	2
TOU	550	1408	335	-1193	-1718	525	2
HSN	1192	637	70	485	846	-361	3
FIN	2759	1697	1013	49	56	-7	3
EDU	1394	3747	-1431	-922	-1016	94	2
HEA	3606	2950	1673	-1017	-1079	62	2
SPC	993	2799	-796	-1010	-945	-65	1
1983–1990							
TOT	24724	35477	4050	-14803	-12488	-2315	-
AGR	1848	3800	3057	-5009	-1672	-3337	1
WAT	-71	154	-291	236	48	19	1
FOR	57	126	-232	162	491	-329	3
MAN	22532	13381	13091	-3940	-4068	128	2
CON	-7612	2893	-10889	384	463	-79	2
CRA	-1910	1034	-3339	398	408	-10	3
TRC	-39	2369	-569	-1839	-1906	67	2
TRD	897	3529	-925	-1707	-1747	40	2
TOU	-2296	837	-224	-2909	-4450	1541	2
HSN	738	436	-342	643	1022	-379	3
FIN	3797	1137	1461	1199	1323	-124	3
EDU	1636	2223	682	-1269	-1401	132	2
HEA	6369	1904	5017	-551	-590	39	2
SPC	-1222	1657	-2448	-432	-409	-22	1

Chapter C

TOTAL REGIONAL EMPLOYMENT: COMPONENTS OF CHANGES

The shift-share analysis results demonstrate whether there was any change in the economic structure of the region during an observed period. At the same time it indicates whether the direction of change resulted in a more or less advantageous structure, which is relevant to the issue of whether regional growth was accelerated or slower. Accelerated or slower employment growth in the republics and provinces (in relation to the Yugoslav average) led to certain shifts in regional share in overall employment (table 1.12). In Montenegro, Macedonia, Serbia (including Kosovo and Metohia) this share rose continuously, while in Croatia and Slovenia it declined. The share of Bosnia and Herzegovina in Yugoslav employment was at first in decline (until 1970), after which it began increasing, while in Vojvodina the situation was the reverse: until 1965 its share in overall employment was on the rise and then began to decline.

Table 1.12 REPUBLICS AND PROVINCES: SHARE IN EMPLOYMENT

REGION	1952	1960	1965	1970	1975	1979	1983
YUG	100.0	100.0	100.0	100.0	100.0	100.0	100.0
BIH	15.7	13.9	13.8	13.6	14.3	14.3	15.2
MN	1.8	2.0	2.0	2.0	2.1	2.2	2.3
CRO	27.4	26.2	26.1	25.1	24.3	24.3	23.9
MAK	5.3	6.3	6.5	6.8	7.1	7.3	7.7
SLO	15.2	14.3	14.2	14.1	14.2	13.8	13.0
SRB	34.6	37.3	37.4	38.4	38.0	38.2	37.9
CES	22.8	23.4	23.4	25.4	25.0	25.5	25.2
KIM	2.2	2.4	2.5	2.5	2.9	3.0	3.2
VOJ	9.6	11.5	11.6	10.5	10.0	9.7	9.5

The factors that influenced these shifts in regional share in overall employment, besides the initial employment level in the region and total (absolute and relative) employment shift in Yugoslavia during the given period, also include the share of each region in the absolute shift in global employment (*Table 1.13*). The share figures vary for every region from one sub-period to another, and, as a result, is not

immediately noticeable that there might be a direct correlation between a region's share in the absolute shift during a certain sub-period and the same region's share in overall employment in the initial (or final) years of the sub-period under consideration. The reason for that, beyond the stated factors which affected regional share in overall employment, lies in the varying intensity and direction of shifts within a single sub-period. The 1965 to 1970 sub-period stands out in particular because during that time large scale institutional changes took place which decisively (but not in the same way in all regions) affected employment trends.

From the standpoint of the shift-share analysis, variable regional employment growth rates appear to be an issue which concerns elements that had either a positive or negative impact on regional employment growth. In other words, is accelerated (or slower) growth the result of favorable or unfavorable and/or regional "peculiarities"? *Table 1.14* shows data on the impact of structural and differential shifts on employment growth. For all of the regions during the seven sub-periods under observation, magnitudes are given in absolute (Δ) and relative (r) form. Thus, for example, between 1952 and 1960 employment in Bosnia and Herzegovina grew by 138308 workers (or by 52,2% in relation to the initial year). Had employment been growing in this Yugoslav republic during this period at the average Yugoslav rate, the increase would have amounted to 191820, i.e. the rate of increase would have been 72,4%. To the extent that the real change is smaller than proportional share it is the result of negative structural and differential shifts. The unfavorable sectorial structure in Bosnia and Herzegovina during the 1952 to 1960 period resulted in a negative structural shift of 43495 workers (or -16,4%), while comparative regional inadequacies generated a negative differential shift of 10017 employed (or -3,8%). The sum of the two negative shifts amounts to -53512 (or -20,2%), which reflects the real shift in employment away from proportional representation (191820 - 53512 = 138308, or in relative terms: 72,4% - 20,2% = 52,2%).

Table 1.13. REPUBLICS AND PROVINCES:
SHARE IN ABSOLUTE EMPLOYMENT SHIFTS

REGION	1952-60	1960-65	1965-70	1970-75	1975-79	1979-83	1983-90
YUG	100.0	100.0	100.0	100.0	100.0	100.0	100.0
BIH	11.3	13.2	10.3	17.4	14.1	23.6	21.8
MNO	2.3	2.0	3.0	2.4	2.4	3.9	3.3
CRO	24.5	25.9	3.9	20.9	24.4	20.2	19.3
MAK	7.8	7.3	11.8	8.7	8.2	11.2	7.6
SLO	12.9	13.8	13.5	14.4	11.7	5.4	6.3
SRB	41.1	37.8	57.6	36.2	39.2	35.6	41.6
CES	24.2	23.2	65.6	23.6	27.8	23.1	28.4
KIM	2.8	2.6	4.2	4.3	3.5	5.1	6.1
VOJ	14.2	12.0	-12.2	8.3	8.0	7.4	7.2

With regard to *Bosnia and Herzegovina*, the structural shift in this sub-period was negative although it demonstrated a constant downward tendency (in relative terms, from -16,4% during the 1952 to 1960 sub-period to -0,3% during the penultimate and last sub-period). In contrast, the differential shift was negative in only two sub-periods (1952–1960 and 1965–1970) and positive in the rest, which resulted in a negative total shift in four of seven sub-periods.

The positive, or negative, total shift of a region during a given sub-period is the result of the absolute magnitude of positive and negative total sectorial shifts. *Table 1.15* depicts sectors with a positive total shift. Due to ponders (the absolute magnitude of positive and negative sectorial total shifts, respectively), there is no firm correlation between the number of positive shift sectors and positive regional shifts. Nevertheless the data in that table has an indicative value.

During almost all sub-periods (with the exception of 1965 to 1970) *Montenegro* saw a negative structural shift. During the entire period under observation there was a positive differential shift which in each of the periods was greater than the structural shift. As a result the overall shift was continuously positive.

With the exception of 1975 to 1979, *Croatia* constantly had a negative total shift. During the first two sub-periods that was the result of a negative structural shift, while the rest of the time of a negative differential shift.

In *Macedonia*, the negative structural and positive differential shift in all sub-periods resulted in a positive overall shift, also in all of the sub-periods.

During the first sub-period in *Slovenia* both shifts were negative and so was the total shift. During the second sub-period (1960–1965) the negative structural shift (-9360 employed) exceeded the positive differential shift (6354 employed), so that the overall shift was negative and amounted to 3006 workers. In all other sub-periods the magnitude and character of the differential shift determined the character of the overall shift. In the 1970–1975 sub-period it was positive, while in all of the remaining sub-periods it was negative.

In *Serbia* up until 1965 the structural shift was negative, and between 1965 and 1990 it hovered around zero, while the differential shift (with the exception of 1970–1975 and 1979–1983) was positive. The magnitude and character of the differential shift determined the character of the overall shift in all sub-periods.

A similar situation, with the exception of the 1960–1965 sub-period when the negative structural shift had a decisive impact on the overall shift, could be seen in *Central Serbia*.

Due to a positive differential shift that was greater than the negative structural shift, in *Kosovo and Metohia* the overall shift was positive in all sub-periods.

Vojvodina had a positive overall shift in only two sub-periods, while from 1965 on its overall shift was constantly negative. Here, too, the magnitude and character of the differential shift prevailed in determining the character of the overall shift.

The fact that the real employment shift in the region was greater than the hypothetical one was the result of a positive overall shift. In contrast, the negative

overall shift resulted in a decrease in employment growth in relation to proportional share. A comparative review of real and hypothetical shifts in employment is very informative. It is presented by region and sub-period in *Table 1.16*.

Table 1.14 EMPLOYMENT GROWTH COMPONENTS BY REGION

Period	Real change		Proportional share		Structural Shift		Differential shift		Total shift	
	Δ	r	Δ	r	Δ	r	Δ	r	Δ	r
Bosnia and Herzegovina										
52-60	1383 08	52.2	191820	72.4	-43495	-16.4	-10017	-3.8	-53512	-20.2
60-65	89612	22.2	94494	23.4	-7971	-2.0	3088	0.8	-4882	-1.2
65-70	18604	3.8	24843	5.0	-1798	-0.4	-4441	-0.9	-6239	-1.3
70-75	156977	30.7	122561	24.0	-3617	-0.7	38033	7.4	34416	6.7
75-79	118257	17.7	120218	18.0	-3671	-0.5	1710	0.3	-1961	-0.3
79-83	139575	17.7	84396	10.7	-2428	-0.3	57606	7.3	55179	7.0
83-90	134963	14.6	93960	10.1	-2975	-0.3	43978	4.7	41003	4.4
Montenegro										
52-60	28060	94.0	21613	72.4	-5424	-18.2	11871	39.8	6447	21.6
60-65	13682	23.6	13571	23.4	-1138	-2.0	1249	2.2	111	0.2
65-70	5441	7.6	3609	5.0	70	0.1	1763	2.5	1832	2.6
70-75	22030	28.6	18460	24.0	-507	-0.7	4077	5.3	3570	4.6
75-79	20345	20.5	17817	18.0	487	0.5	2041	2.1	2528	2.6
79-83	23038	19.3	12810	10.7	-311	-0.3	10539	8.8	10228	8.6
83-90	20457	14.4	14450	10.1	-586	-0.4	6593	4.6	6007	4.2
Croatia										
52-60	299297	65.0	333613	72.4	-59177	-12.8	24861	5.4	-34316	-7.4
60-65	176326	23.2	178114	23.4	-14985	-2.0	13197	1.7	-1788	-0.2
65-70	6972	0.7	47201	5.0	3766	0.4	-43995	-4.7	-40229	-4.3
70-75	188770	20.0	226061	24.0	1861	0.2	-39152	-4.2	-37291	-4.0
75-79	204868	18.1	203615	18.0	1837	0.2	-583	-0.1	1253	0.1
79-83	119400	8.9	143434	10.7	1086	0.1	-25119	-1.9	-24034	-1.8
83-90	119655	8.2	147736	10.1	526	0.0	-28607	-2.0	-28081	-1.9
Macedonia										
52-60	94605	105.8	64749	72.4	-12217	-13.7	42073	47.1	29856	33.4
60-65	49497	26.9	43127	23.4	-11526	-6.3	17896	9.7	6370	3.5
65-70	21229	9.1	11772	5.0	-1177	-0.5	10634	4.6	9457	4.0

70-75	78627	30.9	61050	24.0	-1352	-0.5	18929	7.4	17577	6.9
75-79	68422	20.5	59961	18.0	-1549	-0.5	10010	3.0	8461	2.5
79-83	66147	16.5	43107	10.7	-544	-0.1	23584	5.9	23040	5.7
83-90	47048	10.1	47470	10.1	-1941	-0.4	1519	0.3	-422	-0.1
Slovenia										
52-60	157715	61.5	185700	72.4	-9702	-3.8	-18283	-7.1	-27985	-10.9
60-65	94056	22.7	97062	23.4	-9360	-2.3	6354	1.5	-3006	-0.7
65-70	24388	4.8	25620	5.0	3040	0.6	-4271	-0.8	-1232	-0.2
70-75	129501	24.3	127638	24.0	3378	0.6	-1515	-0.3	1863	0.3
75-79	98116	14.8	119086	18.0	1435	0.2	-22406	-3.4	-20970	-3.2
79-83	32166	4.2	81560	10.7	2817	0.4	-52212	-6.9	-49394	-6.5
83-90	38796	4.9	80382	10.1	5885	0.7	-47471	-6.0	-41586	-5.2
Serbia										
52-60	501487	86.1	421977	72.4	-56156	-9.6	135666	23.3	79510	13.6
60-65	257293	23.7	254098	23.4	-41729	-3.8	44924	4.1	3195	0.3
65-70	104038	7.8	67627	5.0	-3900	-0.3	40311	3.0	36411	2.7
70-75	326293	22.6	346427	24.0	238	0.0	-20372	-1.4	-20134	-1.4
75-79	329375	18.6	318686	18.0	1462	0.1	9228	0.5	10689	0.6
79-83	210413	10.0	225431	10.7	-620	-0.0	-14398	-0.7	-15018	-0.7
83-90	257580	11.1	234501	10.1	-909	-0.0	23989	1.0	23079	1.0
Central Serbia										
52-60	295294	76.8	278361	72.4	-47037	-12.2	63970	16.6	16933	4.4
60-65	157578	23.2	159294	23.4	-6209	-0.9	4493	0.7	-1716	-0.3
65-70	118480	14.2	42208	5.0	13627	1.6	62645	7.5	76272	9.1
70-75	212674	22.3	229048	24.0	5100	0.5	-21473	-2.2	-16374	-1.7
75-79	232994	19.9	210155	18.0	7044	0.6	15795	1.4	22839	2.0
79-83	136532	9.7	150353	10.7	-2580	-0.2	-11241	-0.8	-13821	-1.0
83-90	175490	11.4	156016	10.1	-1686	-0.1	21160	1.4	19474	1.3
Kosovo and Metohia										
52-60	33633	91.9	26502	72.4	-4661	-12.7	11791	32.2	7131	19.5
60-65	17777	25.3	16460	23.4	-2441	-3.5	3759	5.4	1317	1.9
65-70	7655	8.7	4437	5.0	-282	-0.3	3501	4.0	3218	3.7
70-75	38748	40.5	22926	24.0	-394	-0.4	16216	17.0	15822	16.5
75-79	29436	21.9	24176	18.0	-872	-0.6	6133	4.6	5260	3.9
79-83	30129	18.4	17579	10.7	-1131	-0.7	13681	8.3	12550	7.7
83-90	37774	19.5	19678	10.1	-1556	-0.8	19652	10.1	18096	9.3

Vojvodina										
52-60	172560	106.7	117114	72.4	-4458	-2.8	59905	37.0	55446	34.3
60-65	81938	24.5	78344	23.4	-33079	-9.9	36672	11.0	3594	1.1
65-70	-22097	-5.3	20983	5.0	-17244	-4.1	-25835	-6.2	-43080	-10.4
70-75	74871	19.0	94453	24.0	-4468	-1.1	-15115	-3.8	-19582	-5.0
75-79	66945	14.3	84355	18.0	-4710	-1.0	-12700	-2.7	-17410	-3.7
79-83	43752	8.2	57499	10.7	3090	0.6	-16838	-3.1	-13747	-2.6
83-90	44316	7.6	58807	10.1	2333	0.4	-16824	-2.9	-14491	-2.5

Table 1.15 EMPLOYMENT: SECTORS WITH A POSITIVE OVERALL SHIFT

PERIOD	BIH	MNO	CRO	MAK	SLO	SRB	CES	KIM	VOJ
1952-1960	3	5	4	4	4	5	3	3	6
1960-1965	6	6	8	9	10	6	7	7	7
1965-1970	6	8	5	9	6	10	9	5	7
1970-1975	8	8	4	10	9	6	4	13	4
1975-1979	9	8	9	7	6	7	7	11	6
1979-1983	9	12	6	9	5	9	8	10	6
1983-1990	7	8	4	7	2	4	4	12	5

Table 1.16 EMPLOYMENT: CORRELATION OF REAL CHANGE (F) AND PROPORTIONAL SHARE (P)

REGION	1952-1960	1960-1965	1965-1970	1970-1975	1975-1979	1979-1983	1983-1990
BIH	F<P	F<P	F<P	F>P	F<P	F>P	F>P
MNO	F>P	F>P	F>P	F>P	F>P	F>P	F>P
CRO	F<P	F<P	F<P	F<P	F>P	F<P	F<P
MAK	F>P	F>P	F>P	F>P	F>P	F>P	F<P
SLO	F<P	F<P	F<P	F>P	F<P	F<P	F<P
SRB	F>P	F>P	F>P	F<P	F>P	F<P	F>P
CES	F>P	F>P	F<P	F<P	F>P	F<P	F>P
KIM	F>P	F>P	F>P	F>P	F>P	F>P	F>P
VOJ	F>P	F>P	F<P*	F<P	F<P	F<P	F<P

* Absolute decline of 22097 employed (-5.3%).

Chapter D

EMPLOYMENT: BOUDEVILLE'S MODIFIED REGIONAL TYPOLOGY

When real employment change is greater than the hypothetical, that is a positive sign because it indicates that employment is successfully rising. In a limited sense the results of the shirt-share analysis could be interpreted as well as an indication of the failure/success of regional policy¹².

We are concerned here, however, with determining which region was successful or unsuccessful, and in what sub-period, regardless of whether its performance was the result of regional policy measures. In that respect, Boudeville offers an objective¹³ criterion of a region's success.

The sum of the structural and differential shift is revised downward ($S_j + D_j > 0$) or upward ($S_j + D_j < 0$) by proportional regional share (P_j), demonstrating whether with respect to the overall average the region is growing faster (P_j) or slower ($F_j < P_j$).

Depending on the character, magnitude, total impact, and the relationship between structural and differential shifts, regions can be classified according to eight Types as shown in *Table 1.2*.

In Type 1, 2, 3, and 4 regions employment growth is faster than average. In Type 1 and 2 regions such growth owes to favorable sectoral structural and positive differential shifts. In the first instance the region's sectoral structure plays a more prominent role, while in the second it is the differential component. Above average employment growth in Type 3 regions is due to favorable sectoral structure in the region, and in Type 2 that of the differential component. Above average employment growth in Type 3 regions is the result of favorable sectoral structure whose positive effects exceed the negative differential shift. Type 4 regions achieve accelerated employment expansion because the positive differential shift exceeds the negative effects of sectoral structure.

In Type 5, 6, 7, and 8 regions employment growth is below average. The reasons for slower growth vary. While in Type 5 regions slow employment growth is caused by an unfavorable sectoral structure, in Type 6 regions slow employment growth is the result of a negative differential shift. Slower employment growth in Type 7 and 8 regions is due to the convergent negative effect of the structural and differential components, whereas in the first instance structural elements are more negative, and in the second differential ones.

12 What this involves in the first place is *determining the direction of change rather than the absolute success of a regional policy because a normative stance (criterion) on the desired regional distribution of sectors is lacking.*

13 Objectivization is achieved by always viewing the indicator values of a region in a given period in relation to the (Yugoslav) average.

Table 1.17 EMPLOYMENT:
BOUDEVILLE'S MODIFIED REGIONAL TYPOLOGY

PERIOD	BIH	MNO	CRO	MAK	SLO	SRB	CES	KIM	VOJ
1952–1960	8	4	6	4	7	4	4	4	4
1960–1965	6	4	6	4	6	4	6	4	4
1965–1970	7	2	5	4	5	4	2	4	7
1970–1975	4	4	5	4	3	5	5	4	7
1975–1979	6	2	3	4	5	2	2	4	7
1979–1983	4	4	5	4	5	7	7	4	5
1983–1990	4	4	5	6	5	4	4	4	5

Table 1.17 shows that during three sub-periods (1970–1975, 1979–1983 and 1983–1990) *Bosnia and Herzegovina* was characterized by Type 4 successful growth, while in the remaining sub-periods, from the standpoint of Boudeville's modified criteria, it was unsuccessful (Type 8 in the 1952–1960 sub-period, and Type 6 in the 1960–1965 and 1975–1979 sub-periods).

In every sub-period *Montenegro* registered successful growth: in two-sub periods (1965–1970 and 1975–1979) it had Type 2 employment growth, while in the remaining sub-periods Type 4.

Croatia's successful sub-period was from 1975 to 1979, while the remaining periods were relatively unsuccessful. Type 5 characterized the 1965–1970, 1970–1975, 1979–1983 sub-periods, Type 6 characterized the first two sub-periods, and Type 7 the last.

There were no unsuccessful sub-periods in *Macedonia*. All periods were Type 4.

Slovenia was a successful region in only one sub-period (1970–1975), Type 3, and unsuccessful in the remaining sub-periods. In the first, 1952–1960 sub-period it was characterized by Type 7, in the following 1960–1965 sub-period by Type 6, and in the remaining sub-periods by Type 5.

Serbia was successful in six sub-periods (1975–1979 and 1983–1990 – Type 2 and 1952–1970 – Type 4), and in two sub-periods it was unsuccessful (1970–1975 Type 5 and 1979–1983 Type 7). *Central Serbia* was characterized by as many as six different Types: two successful (1965–1970 and 1975–1980 – Type 2 and the initial and last sub-period by Type 4) and three unsuccessful sub-periods (1970–1975 – Type 5, 1960–1965 – Type 6 and 1979–1983 – Type 7).

In *Kosovo and Metohia* employment growth was successful in most sub-periods (Type 4), and unsuccessful from 1965–1979 (Type 7), as well as in the last two sub-periods (1979–1990 – Types 5 and 6).

The results of the shift-share analysis arranged according to Boudeville's modified typology are interpreted solely from an economic point of view, i.e. based on

the assumptions of economic logic which treats labor as a variable factor that faithfully reflects both conjunctural trends and changes in the qualitative and quantitative (efficiency) aspects of the economy. Based on that assumption, employment can be regarded as a general indicator of growth, structural changes, and of an economy's successful or unsuccessful performance (in terms of country, region or sector).

However, employment is not merely an economic indicator. It also reflects social, historical, and political aspects of development so that the results of an analysis of the components of regional employment shifts are not subject to interpretation using the standards of a classical economy alone. The absence of development and the relative abundance of labor made for strong employment pressure. Employment growth was often accompanied (due to the growing expectations of latently unemployed rural residents) by a rising rate of recorded unemployment.¹⁴ Through formal and informal channels (nepotism, corruption, etc.) of securing jobs, with the exception of Vojvodina in the 1965–1970 sub-period and Slovenia in the final sub-period, the number of employed was rising. The fact that a significant number of employed were not involved in manufacturing is suggested by a high correlation between unproductive jobs and the degree of development. The political concept of creating a working class through industrialization and urbanization to serve as a social anchor for the new authorities had a clear impact on the intensity and the sectoral and regional employment dynamic in the social sector. Under the general conditions of loose budgetary restrictions as the fundamental characteristic of the business climate, the social function of employment gained precedence over profitable management¹⁵.

Thus for instance if conclusions were to be drawn based on Boudeville's modified regional typology, Montenegro would seem to be the most successful, followed

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- 14 The Harris-Todaro model greatly contributes to explaining the problem of unemployment. While Lewis (See: W. Arthur Lewis, *Economic Development with Unlimited Supply of Labor*, *Manchester School of Economic and Social Studies*, assumed that the process of migration and urbanization is a reaction to existing possibilities for employment, and that migrants – as long as there is a surplus of rural workforce – are hired at *low* wages, Harris and Todaro came up with a more realistic assumption that a job in the city, if and when found, offers a *higher* income than in rural areas, and that this, of course, attracts migrants in numbers exceeding the possibilities for employment. This model not only explains the high levels of urban unemployment, but questions the efficiency of attempts to lower unemployment by creating new jobs in urban areas as every new job will attract several new migrants. (See: John R. Harris & Michael P. Todaro, *Migration, Unemployment and development: Two Sector Analysis*, *American Economic Review*, Vol. 60, 2, 1970, pp. 126-142; M. P. Todaro, *Income Expectation, Rural-Urban Migration and Employment in Africa*, *International Labor Review*, Vol. 104, 5, 1971, pp. 378-413; M. P. Todaro, *International Migration and Economic Development: A Review of Theory, Evidence and Research Priorities*, ILO, Geneva, 1976; J. R. Harris, *Urban and Industrial Concentration in Developing Economies: An Analytical Framework*, *Regional and Urban Economies*, Vol. 1, August 1971; J. R. Harris & R. Sabot, *Urban Unemployment in Developing Countries: Toward a More General Search Model*, in: *Essays on Migration and the Labor Market in Developing Countries*, ed. by R. Sabot, Westview, Boulder, 1981).
- 15 While "social" criteria prevailed in the economy, a vulgar economism was forced upon science, arts, culture, and social services, destroying not only their autonomy and autochthonous nature, but endangering their very survival.

by Kosovo and Metohia and Macedonia. The least successful were Slovenia and Croatia, which had an above average rate of employment growth in only one sub-period. It does not follow, however, that the Montenegrin economy was more successful than Slovenia's but only that employment growth was faster in the former than in the latter. If only economic criteria for employment prevailed in both regions, the result might be an indicator that Montenegro was developing faster than Slovenia. It would then also be possible to conclude that one of the basic officially proclaimed goals of Yugoslavia's regional policy (accelerated growth for all with the least developed regions growing at the fastest pace) was achieved. Technically, it was achieved if one refers to employment growth, which was faster in underdeveloped than in developed regions. However, in conditions where non-economic factors had a strong impact on employment, that does not indicate that the development of those regions was faster.

Pointing to non-economic employment factors, however, by no means reduces the significance of the shift-share analysis's results. These results provide precise data on real employment shifts. Non-economic factors undoubtedly also had an economic impact. The analysis identifies the components of regional employment shifts. When interpreting the results, the non-economic context of the shifts should be borne in mind in addition to economic factors as well¹⁶.

¹⁶ It should be noted that these *changes* are most frequently *interpreted in terms of growth*: a favourable change, i.e. the success of a region, is measured by the rise in a respective indicator (here, it is employment). An alternative approach to measuring success would be in terms of stability over growth. From the point of view of stabilization, therefore, the specialization of regions in sectors with minimum workforce fluctuations, and not the maximum rise of employment rates (fixed assets, or gross domestic product), would be more favourable.

Chapter E

COMPONENTS OF REGIONAL SECTORAL SHIFTS IN FIXED ASSETS

The shift-share analysis includes the purchase price of fixed assets in the social sector of the economy. Shifts are observed at the *level of fields of activity* (oblast delatnosti), wherein water management is associated with agriculture. That was done because during a period of time water management was treated statistically as a department of agriculture. Data indicating the value of fixed water management assets is provided separately for Yugoslavia, Croatia, Central Serbia, and Vojvodina beginning in 1963, for Macedonia and Slovenia beginning in 1964, for Kosovo and Metohia as of 1967, Bosnia and Herzegovina as of 1969, and Montenegro as of 1971.

The value of fixed assets is expressed in terms of 1972 prices in millions of dinars. These dinars were in circulation between mid-1965 and the end of 1989.

BOSNIA AND HERZEGOVINA

The results of the shift-share analysis of fixed assets in Bosnia and Herzegovina are presented in Table 1.18. In three sub-periods (1952–1960, 1975–1979, 1979–1983) the real change was greater than proportional share which would have been achieved had the growth of fixed assets in Bosnia and Herzegovina been equal to average growth on the Yugoslav level, while in four sub-periods (1960–1965, 1965–1970, 1970–1975 and 1983–1990) it was the reverse.

During the first sub-period (1952–1960) the structural shift was negative, while the total differential shift was positive. That means that in Bosnia and Herzegovina, during this sub-period, sectors defined as slow growing in the Yugoslav context predominated, but that the growth of fixed assets, ruled by regional factors, was above the Yugoslav average. According to the first parameter, fixed assets in Bosnia and Herzegovina were smaller for 712 million dinars, while according to the second, they were greater by 5746 million dinars than what regional share would have suggested (10820). That share was 5031 million dinars greater than the real change (15851).

The greatest negative structural shift was experienced by transport and communication (causing a loss of 2498 million dinars in fixed assets), while the greatest positive differential shift was seen by manufacturing, due to the accelerated growth of which fixed assets were greater by 5542 million dinars.

In Bosnia and Herzegovina during this sub-period there were two allocation effect Type 4 sectors – forestry and transport and communication. In three sectors, agriculture, manufacturing, and catering and tourism, this republic was shown to be comparatively good without specializing in them (Type 3 allocation effect). Artisanship and “other activities” are sectors marked by the Type 2 allocation effect. They were comparatively inferior, but Bosnia and Herzegovina did not specialize in them. Finally, during this sub period Bosnia and Herzegovina did specialize in two sectors, construction and trade, where it was comparatively inferior (Type 1 allocation effect).

Between 1960 and 1965 the negative total effect of the two shifts was the result of the sum of the negative effects of both shifts, structural and differential. The unfavorable structure caused the value of fixed assets to be reduced by 1122 million dinars, while the negative total differential shift was 2261 million dinars. The negative structural shift was mainly due to transport and communication (–2227 million dinars), and the negative total differential shift to manufacturing (–1476 million dinars).

There were no Type 4 allocation effect sectors in this sub-period. Agriculture, artisanship and trade were characterized by the Type 3 allocation effect. Comparatively inferior Type 2 sectors which the republic was not specialized in predominated. These were construction, transport and communication, catering and tourism, and “other activities.” The worst option, Type 1, i.e. specialization in comparatively inferior sectors, is evidenced in forestry and manufacturing.

The fact that real change (16384 million dinars) in the “reform” sub-period between 1965 and 1970 was lower than hypothetical regional share (18905 million dinars) was caused by a negative structural (–940) and negative total differential shift (–1581).

The fact that the total structural shift was negative was due mostly to transport and communication (–2123), while the negative differential shift owed mainly to manufacturing (–456) and trade (–451 million dinars).

During this sub-period as well, Bosnia and Herzegovina did not specialize in any comparatively good sector. Type 3 allocation effect sectors were agriculture and artisanship. Type 2 allocation effect sectors continued to predominate: transport and communication, construction, trade, catering and tourism, and “other activities.” The other sectors which did not undergo change – forestry and manufacturing – were characterized by the Type 1 allocation effect, the least favorable option.

During the 1970 to 1975 sub-period as well, real change (25908 million dinars) was less than proportional regional share (27047 million dinars). This difference is the result of the negative structural (–83) and negative total differential shift (–1055 million dinars). Transport and communication had the most to do with the negative structural shift (–1097), while manufacturing had the greatest impact on the negative total differential shift (–2416 million dinars).

During this sub-period Bosnia and Herzegovina specialized in one comparatively good sector, forestry (Type 4). The republic did not specialize in five com-

paratively good Type 3 sectors: construction, artisanship, transport and communication, trade, and catering and tourism. "Other activities" are characterized by the Type 2 allocation effect, while manufacturing did not perform comparatively well, although the republic did specialize in it (Type 1).

During the 1975–1979 period real change in the value of fixed assets (33946) was greater than hypothetical regional share (29563), which was the result of the positive character of both shifts. The positive structural shift (524 million dinars) and the positive differential shift (3859 million dinars) came about mostly due to manufacturing, with 1840, and 4732 million dinars, respectively.

During this sub-period manufacturing was the only sector characterized by the most advantageous Type 4 of allocation effect. The Type 3 allocation effect characterized four sectors: agriculture, trade, service and tourism, and "other activities." Transport and communication were the only Type 2 allocation effect sector. Forestry, construction, and artisanship showed the least favorable combination – specialization in the comparatively inferior Type 1 allocation effect sector.

During the 1979–1983 sub-period the real change in the value of fixed assets (30029 million dinars) in Bosnia and Herzegovina considerably exceeded hypothetical regional share (24281 million dinars). The difference is caused by the positive total (5344 million dinars) and to an even greater extent net (5516 million dinars) differential shift, as well as a positive structural shift of 403 million dinars. Manufacturing (563 million dinars) had the greatest impact on the positive structural shift. It had a similar key contribution to the positive differential shift (4435 million dinars).

During this sub-period Bosnia and Herzegovina specialized in manufacturing sector where it did have comparative Type 4 allocation effect advantages. Type 3 allocation effect sectors were the most numerous, five altogether: agriculture, construction, trade, catering and tourism, and "other activities."

Transport and communication were the only non-specialization sector for Bosnia and Herzegovina, and it was at the same time comparatively inferior (Type 2). The republic specialized in two sectors during this sub-period which were Type 1 and comparatively inferior: forestry and artisanship.

During the final sub-period (1983–1990) Bosnia and Herzegovina showed slightly less change in the real value of fixed assets (25264 million dinars) in relation to what might have been anticipated, with regional share at 25368 million dinars. This was the result of the impact of the total positive differential shift of 483 million dinars which exceeded the negative structural shift (–542 million dinars). Manufacturing contributed the most to the negative structural shift (–487 million dinars), while the high positive total differential shift owed mainly to transport and communication (an increase of 886 million dinars).

During this sub-period Bosnia and Herzegovina did not specialize in any comparatively good sectors. Type 3 allocation effect sectors continued to predominate: construction, transport and communication, catering and tourism, and "other activities." The number of comparatively inferior, non-specialized Type 2 sectors dur-

ing this period increased to three. These were: agriculture, artisanship, and trade. Forestry and manufacturing were specialization sectors for the republic, although they were Type 1, i.e. comparatively inferior.

Table 1.18 FIXED ASSETS OF THE BOSNIA AND HERZEGOVINA
ECONOMY: SHISHA RESULTS

Sector	Real change	Proportional share	Structural shift	Differential shift			
				Total	Net differential shift	Allocation effect	
						Amount	Type
1952–1960							
TOT	15851	10820	-712	5742	7136	-1394	-
AGR+	180	29	38	112	1082	-969	3
FOR	554	562	-32	24	7	17	4
IND	11761	4633	1586	5542	6024	-482	3
CON	270	275	62	-67	-61	-6	1
TRD	41	34	17	-11	-21	10	2
COM	2543	4739	-2498	302	280	22	4
CME	291	361	70	-140	-132	-9	1
HTU	169	125	27	17	27	-9	3
OTHER	42	61	19	-38	-69	32	2
1960–1965							
TOT	12496	15879	-1122	-2261	113	-2374	-
AGR+	762	119	205	438	2435	-1997	3
FOR	302	676	-103	-272	-88	-183	1
IND	8402	9545	333	-1476	-1321	-155	1
CON	522	330	249	-57	-70	13	2
TRD	201	45	37	119	317	-198	3
COM	1347	4526	-2227	-952	-1029	77	2
CME	670	399	220	52	70	-19	3
HTU	220	176	154	-109	-191	81	2
OTHER	70	63	10	-3	-9	6	2
1965–1970							
TOT	16384	18905	-940	-1581	-1612	32	-
AGR+	771	448	189	134	380	-246	3

FOR	357	700	-169	-174	-62	-112	1
IND	10993	11772	-323	-456	-399	-57	1
CON	664	513	197	-46	-55	9	2
TRD	113	130	-20	3	4	-1	3
COM	1969	4374	-2123	-282	-310	28	2
CME	983	638	797	-451	-546	94	2
HTU	511	247	541	-277	-537	260	2
OTHER	23	85	-30	-32	-89	57	2
1970–1975							
TOT	25908	27047	-83	-1055	-325	-730	-
AGR+	622	820	-162	-36	-91	55	2
FOR	807	884	-171	94	35	59	4
IND	15490	17213	693	-2416	-2050	-366	1
CON	1558	837	228	493	579	-85	3
TRD	625	186	85	354	482	-128	3
COM	4472	5403	-1097	166	180	-13	3
CME	1369	1114	125	129	178	-49	3
HTU	883	492	211	180	423	-243	3
OTHER	82	98	4	-20	-60	41	2
1975–1979							
TOT	33946	29563	524	3859	5101	-1242	-
AGR+	1185	839	-223	570	1432	-862	3
FOR	438	952	-319	-195	-69	-126	1
IND	25033	18461	1840	4732	4145	587	4
CON	962	1183	73	-293	-289	-4	1
TRD	543	361	262	-81	-71	-10	1
COM	2921	5656	-1031	-1704	-1794	90	2
CME	1715	1325	37	354	464	-111	3
HTU	766	684	-147	230	483	-253	3
OTHER	383	103	33	247	800	-553	3
1979–1983							
TOT	30029	24281	403	5344	5516	-172	-
AGR+	806	735	-213	284	622	-338	3
FOR	597	647	-6	-44	-17	-27	1
IND	20953	15955	563	4435	3788	647	4

CON	1054	889	-194	358	392	-34	3
TRD	353	323	118	-88	-84	-4	1
COM	3642	3907	288	-553	-659	106	2
CME	1700	1128	-62	634	808	-175	3
HTU	520	558	-119	82	164	-82	3
OTHER	405	139	29	236	503	-266	3
1983–1990							
TOT	25264	25368	-542	483	1036	-598	-
AGR+	952	571	136	245	543	-298	3
FOR	587	641	111	-165	-68	-97	1
IND	14658	16879	-1734	-487	413	-74	4
CON	1447	921	209	316	336	-20	3
TRD	325	330	21	-26	-27	1	2
COM	5703	3878	886	939	1193	-253	3
CME	607	1231	-345	-280	-338	58	2
HTU	573	553	-79	99	200	-101	3
OTHER	475	385	179	111	192	-81	3

MONTENEGRO

The shift-share analysis findings for fixed assets in Montenegro are given in *Table 1.19*. In all sub-periods, except between 1965–1970, real change was greater than the proportional share that would have been achieved had the growth of fixed assets in Montenegro been equal to Yugoslav average growth.

During the first sub-period (1952–1960) both the structural (180 million dinars) and the total differential shift (1676 million dinars) were positive. That means that in this segment of time in Montenegro accelerated growth sectors predominated, and that the growth of fixed assets during this period in the region was above the Yugoslav average. The greatest positive structural and positive total differential shift was shown by manufacturing which, in the first category, generated “gains” of 125, and in the second 1317 million dinars.

During this sub-period in Montenegro there were six Type 4 allocation effect sectors: agriculture, manufacturing, artisanship, trade, catering and tourism, and “other activities.” In two sectors, forestry and transport and communication, the republic was comparatively successful, but without being specialized in them (Type 3 allocation effect). There were no Type 2 allocation effect sectors. Only construction was characterized by allocation effect Type 1.

Between 1960 and 1965 the positive total effect of the two shifts was the result of the impact and favorable structure (an increase of 213 million dinars), as well as faster growth of regional sectors in relation to growth on the Yugoslav level (an increase of 3003 million dinars). Catering and tourism contributed the most to the positive structural shift (107 million dinars), while the same was done for the positive total differential shift by manufacturing (1509 million dinars) and transport and communication (1318 million dinars).

During this sub-period there were four Type 4 allocation effect sectors. These were manufacturing, artisanship, catering and tourism, and "other activities." Forestry, transport and communication, and trade were characterized by the Type 3 allocation effect, while agriculture was a comparatively inferior sector which the republic did not specialize in (Type 2). The least favorable option (Type 1 specialization in comparatively inferior sectors) is seen only in construction.

The fact that real change (3080 million dinars) in the 1965 to 1970 sub-period was less than hypothetical regional share (3826 million dinars) is due to the predominant negative impact of the total differential shift (-1022 million dinars) in relation to a positive structural shift of only 275 million dinars.

The fact that, overall, the structural shift was positive was mainly due to catering and tourism with a 561 million dinar increase in fixed assets, while manufacturing was the key factor in the negative differential shift (a decrease of 1492 million dinars).

During this sub-period Montenegro did not specialize in any comparatively good sector. Type 3 allocation effect sectors predominated: forestry, construction, artisanship, transport and communication, and trade. Agriculture and "other activities" were Type 2 allocation effect sectors, while catering and tourism was characterized by the least favorable option, the Type 1 allocation effect.

During the 1970-1975 sub-period the real shift in the value of fixed assets (5820 million dinars) again exceeded proportional share (5363 million dinars), which was the result of both the positive structural shift (125 million dinars) and the positive total differential shift (322 million dinars). Manufacturing impacted the most on the positive total differential shift (422 million dinars), while catering and tourism had the same impact on the positive structural shift (255 million dinars).

During this sub-period forestry and transport and communication were characterized by the most favorable allocation effect. The Type 3 allocation effect shows up in four sectors: agriculture, manufacturing, trade, and "other activities." Artisanship was marked by the Type 2 allocation effect, while catering and tourism was characterized by the most unfavorable option, Type 1 allocation effect, i.e. specialization in a comparatively inferior sector.

During the 1975-1979 sub-period also, real change in the value of fixed assets (6683 million dinars) was greater than hypothetical regional share (6104). That was made possible by the total differential shift (648 million dinars), while the structural shift was negative (-69 million dinars). Transport and communication contributed

the most to the negative structural shift (-263), as well as to the positive differential shift (1220 million dinars).

During this sub-period Montenegro specialized in one comparatively good sector – transport and communication. The republic did not specialize in two Type 3 comparatively good sectors – manufacturing and artisanship. There were four Type 2 allocation effect sectors: agriculture, construction, trade, and “other activities.” Forestry and catering and tourism were comparatively inferior and the republic specialized in these (Type 1).

During the 1979 to 1983 sub-period the real shift in the value of fixed assets in Montenegro (6215 million dinars) considerably exceeded hypothetical regional share (4946 million dinars). The difference was due, primarily, to the positive total differential effect (1182 million dinars), since the positive structural shift amounted to only 87 million dinars.

The positive structural shift was mostly due to transport and communication (99 million dinars) and manufacturing (95 million dinars). Catering and tourism contributed the most to the positive differential shift (540 million dinars).

During this sub-period Montenegro specialized in three sectors in which it had comparative advantages (Type 4 allocation effect). These were forestry, transport and communication, and catering and tourism. Type 3 allocation effect sectors were the most numerous: construction, artisanship, trade, and “other activities.” Agriculture and manufacturing were non-specialization sectors for Montenegro and were, besides, comparatively inferior (Type 2). There were no Type 1 allocation effect sectors during this period.

During the final sub-period (1983–1990) Montenegro again exceeded the real shift in the value of fixed assets (5949 million dinars) in relation to what might have been “expected” (regional share was 5185 million dinars). This was the result of the impact of the positive total differential shift (707 million dinars) which was considerably greater than the structural shift (57 million dinars). Transport and communication had the most to do with the structural shift (316 million dinars), while manufacturing was mostly responsible for the high total differential shift (538 million dinars).

During this sub-period Montenegro specialized in three comparatively good sectors: forestry, catering and tourism, and artisanship. Four sectors were characterized as Type 3 allocation effect sectors: agriculture, manufacturing, construction, and trade. There were no Type 2 allocation effect sectors, while transport and communication and “other activities” were characterized by the Type 1 allocation effect.

Table 1.19 FIXED ASSETS OF THE MONTENEGRO ECONOMY:
SHISHA RESULTS

Sector	Real change	Proportional share	Structural shift	Differential shift			
				Total	Net differential shift	Allocation effect	
						Amount	Type
1952–1960							
TOT	2518	662	180	1676	3430	-1753	-
AGR+	53	22	28	3	2	1	4
FOR	28	1	-0	27	306	-279	3
IND	1806	365	125	1317	1113	204	4
CON	32	89	20	-77	-13	-64	1
TRD	24	5	3	16	13	3	4
COM	370	47	-25	348	1990	-1642	3
CME	52	41	8	3	2	1	4
HTU	122	84	18	20	3	17	4
OTHER	31	9	3	19	14	5	4
1960–1965							
TOT	5042	1826	213	3003	4442	-1439	-
AGR+	62	44	75	-57	-99	42	2
FOR	55	16	-2	41	65	-24	3
IND	2789	1237	43	1509	1198	310	4
CON	125	76	57	-9	-5	-3	1
TRD	37	17	14	7	6	1	4
COM	1437	235	-116	1318	3152	-1835	3
CME	155	56	31	69	77	-8	3
HTU	336	123	107	106	31	76	4
OTHER	46	23	4	19	18	1	4
1965–1970							
TOT	3080	3826	275	-1022	-700	-321	-
AGR+	59	65	27	-33	-131	98	2
FOR	93	38	-9	64	83	-19	3
IND	749	2305	-63	-1492	-1350	-143	1
CON	186	121	46	19	20	-1	3
TRD	27	31	-5	1	1	-0	3

COM	1106	854	-414	667	759	-93	3
CME	289	117	146	25	34	-8	3
HTU	562	256	561	-255	-97	-158	1
OTHER	9	40	-14	-17	-20	3	2
1970-1975							
TOT	5820	5363	125	332	834	-503	-
AGR+	184	94	-19	109	473	-364	3
FOR	91	83	-16	24	19	5	4
IND	3243	2712	109	422	451	-29	3
CON	175	211	57	-93	-86	-7	1
TRD	24	44	20	-40	-46	6	2
COM	1112	1393	-283	2	1	0	4
CME	317	256	29	32	39	-6	3
HTU	583	526	225	-168	-73	-95	1
OTHER	91	46	2	44	57	-13	3
1975-1979							
TOT	6683	6104	-69	648	716	-67	-
AGR+	29	136	-36	-71	-226	156	2
FOR	-9	95	-32	-72	-53	-19	1
IND	3977	3192	318	467	488	-21	3
CON	161	221	14	-73	-80	7	2
TRD	162	42	30	90	141	-51	3
COM	2401	1444	-263	1220	1039	181	4
CME	141	305	8	-172	-203	31	2
HTU	-219	603	-130	-692	-341	-351	1
OTHER	40	67	21	-48	-49	1	2
1979-1983							
TOT	6215	4946	87	1182	1008	174	-
AGR+	9	85	-25	-52	-198	147	2
FOR	68	54	-1	15	15	1	4
IND	2739	2686	95	-42	-44	1	2
CON	293	162	-35	167	204	-37	3
TRD	266	58	21	187	205	-17	3
COM	1547	1340	99	109	77	32	4
CME	348	207	-11	152	216	-63	3
HTU	781	307	-66	540	400	140	4
OTHER	162	47	10	105	135	-29	3

1983–1990							
TOT	5949	5185	57	707	1186	-479	-
AGR+	171	70	17	84	315	-231	3
FOR	103	56	10	37	36	1	4
IND	2967	2707	-278	538	592	-54	3
CON	322	185	42	95	104	-9	3
TRD	114	94	6	14	11	3	4
COM	1491	1381	316	-205	-152	-53	4
CME	349	232	-65	182	242	-61	3
HTU	435	390	-56	101	61	41	4
OTHER	-10	67	65	-142	-141	-1	1

CROATIA

The results of shift-share analysis of fixed assets in Croatia are given in *Table 1.20*. Of the seven analyzed sub-periods in two (the initial sub-period from 1952-1960, and final from 1983-1990), real change exceeded the proportional share that would have been achieved had the growth of fixed assets in Croatia been equal to the national average, while in all other sub-periods the situation was the reverse.

In the first sub-period (1952-1960) both the structural (985 million dinars) and total differential shifts (622 million dinars) were positive. The biggest positive structural shift was in manufacturing (3535 million dinars), while the biggest differential shift was in transport and communication (4414 million dinars).

In this sub-period in Croatia only one sector, forestry, was characterized by the Type 4 allocation effect. In the transport and communication sector, the republic fared comparatively well, but did not specialize in it (Type 3 allocation effect). Two sectors were characterized by the Type 2 allocation effect – manufacturing and trade, which fared comparatively poorly, but, fortunately, Croatia did not specialize in them. Type 1 sectors predominated – agriculture, construction, artisanship, hospitality and “other activities.” This is to say that in this sub-period Croatia specialized in five sectors in which it had comparatively poor results.

From 1960 to 1965 the total negative effect of the two shifts was the consequence of unfavorable structure (-738 million dinars) and the total differential shift (-3178 million dinars). The biggest “contribution” to the negative structural shift had to do to transport and communication (-4884 million dinars), while manufacturing was “responsible” for the total negative differential shift (-2842 million dinars).

In this sub-period there was only one Type 4 allocation effect sector – transport and communication. “Other activities” were of Type 3 allocation effect. Agri-

culture, manufacturing and trade were comparatively bad sectors which this republic did not specialize in (Type 2). The worst variant – specialization in comparatively bad sectors, i.e. Type 1 – appeared in the cases of forestry, construction, artisanship and catering and tourism.

The fact that the real shift in the 1965-1970 sub-period (32598 million dinars) was lower than hypothetical regional share (34158 million dinars) was due to the negative structural (-42) and negative total differential shift (-1518 million dinars). The transport and communication sector was “responsible” for the negative structural shift, with a 5440 million dinars lower value in fixed assets, while the biggest “contribution” to the negative differential shift was made by manufacturing (-433 million dinars).

In this period Croatia specialized in two comparatively good sectors – artisanship and catering and tourism. Two sectors were of Type 3 allocation effect – agriculture and trade. The number of Type 2 allocation effect sectors remained the same as in the preceding period and comprised manufacturing, construction and “other activities,” whereas the number of the least favorable, Type 1 sectors was halved to only forestry and transport and communication.

In the 1970-1975 sub-period real change (47805 million dinars) was lower than proportional regional share (50275 million dinars). The difference should be attributed to the negative total differential shift (-2896 million dinars) that prevailed over the positive structural shift (426 million dinars). Transport and communication “contributed” the most (-3891 million dinars) to the negative total differential shift, while hospitality crucially influenced the positive structural shift (1926 million dinars).

In this period there was no sector characterized by the most favorable type of allocation effect. The Type 3 allocation effect characterized three sectors – agriculture, manufacturing and trade. Construction and “other activities” were of Type 2 allocation effect sectors, whereas the least favorable combination – specialization in a bad sector – appeared in four sectors: forestry, artisanship, transport and communication and hospitality.

In the 1975-1979 sub-period real change in the value of fixed assets (52770 million dinars) was by two million dinars lower in relation to hypothetical regional share (54826 million dinars). This was due to the negative structural shift (-125 million dinars) and the negative total differential shift (-932 million dinars). Transport and communication “contributed” the most to the negative structural shift (-2328 million dinars), while manufacturing was the most responsible for the negative differential shift.

In this sub-period Croatia specialized only in one comparatively good sector – forestry. The republic failed to specialize in four comparatively good sectors (Type 3): agriculture, construction, trade and “other activities.” Manufacturing was of the Type 2 allocation effect, while three sectors in this sub-period (artisanship, transport and communication and catering and tourism) were not comparatively good, although the republic specialized in them (Type 1).

In the 1979-1983 sub-period real change in the value of fixed assets (41040 million dinars) in Croatia was again lower than hypothetical regional share (42927 million dinars). The difference was caused by the negative total differential (-1552) and the negative structural (-335 million dinars) shift. Catering and tourism impacted the most on the negative structural shift (-858 million dinars) while the negative differential shift was influenced the most by manufacturing (-5522 million dinars).

In this sub-period Croatia specialized in two sectors in which it had comparative advantages (Type 4 allocation effect): construction and transport and communication. Agriculture and trade were of the Type 3 allocation effect. Croatia did not specialize in manufacturing and “other activities,” sectors that also were comparatively bad (Type 2). There were three sectors in which the republic specialized in this sub-period, which were comparatively bad (Type 1) – forestry, artisanship and catering and tourism.

In the last surveyed sub-period (1983-1990) Croatia exceeded real change in the value of fixed assets (45388 million dinars) in relation to the “expected” (regional share of 42777 million dinars). This was the result of the positive total differential shift (2026 million dinars) and the substantially lower structural shift (586 million dinars). Transport and communication contributed the most to the structural shift (2355 million dinars), whereas the high positive total differential shift owed to manufacturing (1407 million dinars more).

In this sub period-Croatia specialized in two comparatively good sectors – transport and communication and trade (Type 4 allocation effect). Agriculture, manufacturing and “other activities” were of the Type 3 allocation effect. In this sub-period there were no comparatively bad and non-specialized sectors (Type 2). Forestry, construction, catering and tourism, and artisanship were sectors in which the republic specialized, although they were comparatively bad (Type 1).

Table 1.20 FIXED ASSETS OF THE CROATIAN ECONOMY: SHISHA RESULTS

Sector	Real change	Pproportional share	Structural shift	Differential shift			
				Total	Net differential shift	Allocation effect	
						Amount	Type
1952-1960							
TOT	23924	22318	985	622	1702	-1080	-
AGR+	611	867	1130	-1387	-930	-456	1
FOR	453	411	-24	65	50	15	4
IND	12043	10327	3535	-1819	-1830	11	2
CON	649	630	142	-124	-101	-22	1

TRD	174	213	106	-145	-94	-51	1
COM	8271	8136	-4289	4424	4922	-498	3
CME	769	660	128	-18	-19	1	2
HTU	929	788	169	-27	-14	-14	1
OTHER	25	286	87	-347	-282	-65	1
1960–1965							
TOT	23994	27910	-738	-3178	-3682	504	-
AGR+	1861	909	1573	-620	-792	172	2
FOR	288	521	-79	-154	-114	-40	1
IND	11080	13451	470	-2841	-3172	331	2
CON	863	773	583	-493	-455	-38	1
TRD	381	236	194	-49	-44	-5	1
COM	6484	9926	-4884	1442	1249	193	4
CME	916	859	473	-416	-461	45	2
HTU	1770	1032	903	-164	-86	-79	1
OTHER	351	202	31	118	193	-75	3
1965–1970							
TOT	32598	34158	-42	-1518	-1594	75	-
AGR+	2529	1607	680	242	346	-104	3
FOR	302	565	-136	-126	-100	-26	1
IND	14362	16241	-446	-1433	-1642	209	2
CON	1358	1037	398	-77	-82	5	2
TRD	439	371	-56	124	112	12	4
COM	4638	11209	-5440	-1131	-876	-255	1
CME	2861	1133	1414	314	386	-72	3
HTU	5938	1667	3660	611	317	294	4
OTHER	171	329	-116	-42	-54	12	2
1970–1975							
TOT	47805	50275	426	-2896	-1096	-1800	-
AGR+	3272	2832	-559	999	1349	-350	3
FOR	382	720	-139	-199	-168	-31	1
IND	25445	23370	941	1134	1317	-183	3
CON	1818	1700	462	-344	-369	26	2
TRD	653	586	269	-202	-162	-40	1
COM	6991	13655	-2773	-3891	-3086	-805	1
CME	3459	2502	282	675	770	-95	3

HTU	5626	4494	1926	-794	-380	-414	1
OTHER	159	417	17	-275	-368	93	2
1975-1979							
TOT	52770	54826	-1125	-932	-372	-560	-
AGR+	2535	3293	-877	119	141	-22	3
FOR	513	678	-227	62	57	5	4
IND	27442	26626	2654	-1838	-2070	232	2
CON	3086	1925	118	1043	1172	-130	3
TRD	1004	673	489	-157	-138	-20	1
COM	9469	12770	-2328	-974	-842	-132	1
CME	3335	3111	86	138	143	-5	3
HTU	4185	5379	-1159	-35	-18	-18	1
OTHER	1201	370	119	711	1182	-471	3
1979-1983							
TOT	41040	42927	-335	-1552	-2628	1076	-
AGR+	2113	2447	-709	374	435	-61	3
FOR	367	502	-5	-131	-116	-15	1
IND	16449	21222	748	-5522	-6269	747	2
CON	1394	1762	-384	17	16	0	4
TRD	565	600	218	-254	-232	-22	1
COM	14346	9415	693	4237	3706	531	4
CME	2557	2506	-137	188	191	-3	3
HTU	2897	4007	-858	-252	-124	-128	1
OTHER	353	465	97	-209	-235	26	2
1983-1990							
TOT	45388	42777	586	2026	3449	-120	-
AGR+	2818	1936	463	419	462	-43	3
FOR	535	481	83	-29	-27	-2	1
IND	19790	20487	-2105	1407	1659	-252	3
CON	1705	1706	388	-388	-376	-13	1
TRD	475	597	39	-161	-156	-5	1
COM	13063	10302	2355	407	328	79	4
CME	2303	2525	-707	485	482	3	4
HTU	3191	3832	-548	93	-46	-47	4
OTHER	909	447	431	31	37	-6	3

MACEDONIA

Table 1.21 lists the findings of the fixed assets shift-share analysis for Macedonia. In the first five sub-periods (1952-1960, 1960-1965, 1965-1970, 1975-1979) real change exceeded the proportional share that would have been achieved had the growth of fixed assets in Macedonia been equal to the Yugoslav average, while in the two final sub-periods (1979-1983 and 1983-1990) the situation was the reverse.

In the first sub-period (1952-1960) the structural shift was negative and the total differential shift positive. This means that in this sub-period in Macedonia slow growth sectors predominated – in terms of Yugoslavia as a whole – but that the growth of fixed assets, influenced by regional factors, was above the Yugoslav average. In terms of the first parameter, fixed assets in Macedonia were 309 million dinars lower and, in terms of the second, 1664 million dinars higher than those suggested by regional share (3305). This share exceeded real change (4660) by 1355 million dinars. In this, transport and communication showed the highest negative structural shift (causing a loss of 911 million dinars in the value of fixed assets), while manufacturing had the biggest positive differential shift (causing an increase in fixed assets of 1408 million dinars due to its faster growth).

In this sub-period in Macedonia there was one Type 4 allocation effect sector – agriculture. In two sectors the republic performed comparatively well (manufacturing and trade), but it did not specialize in either (Type 3 allocation effect). Forestry, artisanship and “other activities” were Type 2 allocation effect, i.e. were comparatively bad, but Macedonia did not specialize in them. Finally, in this sub-period the republic specialized in three sectors – construction, transport and communication and catering and tourism – in which it was comparatively bad (Type 1 allocation effect).

In the 1960-1965 sub-period Macedonia achieved a positive total effect on the whole. This was also due to a favorable structure (335 million dinars) and positive overall differential shift, which amounted to 752 million dinars. Agriculture contributed the most to the positive structural shift (791 million dinars), while manufacturing did likewise when the total differential shift was concerned (850 million dinars).

In this period there was no Type 4 allocation effect sector in this republic. As many as seven sectors – forestry, manufacturing, construction, artisanship, trade catering and tourism, and “other activities” – were Type 3 allocation effect sectors. There was no Type 2 allocation effect sector. The worst variant – specialization in comparatively bad sectors, i.e. Type 1 sectors – appeared in the cases of agriculture and transport and communication.

Real change (7839 million dinars) in the 1965-1970 sub-period was above hypothetical regional share (6617 million dinars), which was also due to the positive structural (75) and positive total differential shifts (1148 million dinars). Agriculture was to be credited the most for the positive structural shift (325 million dinars),

while manufacturing contributed the most to the positive differential shift (851 million dinars).

In this sub-period Macedonia specialized in two comparatively good sectors – agriculture and construction. Manufacturing, artisanship and transport and communication were Type 3 allocation effect sectors. Forestry, trade and hospitality were Type 2, whereas “other activities” fared the worst, being a Type 1 allocation effect sector.

In the 1970-1975 sub-period real change (13023 million dinars) was higher than proportional regional share (10454 million dinars). The difference was the result of the positive total differential shift (2717 million dinars), which substantially exceeded the negative structural shift (-148 million dinars). Transport and communication were mostly responsible for the negative structural shift (-419 million dinars), while manufacturing crucially impacted on the positive total differential shift (2066 million dinars).

In this sub-period Macedonia specialized in one comparatively good sector – agriculture. It did not specialize in five such sectors (Type 3), i.e. forestry, manufacturing, artisanship, trade and catering and tourism. Transport and communication and “other activities” were of the Type 2 allocation effect, whereas construction was not a comparatively good sector, although the republic specialized in it (Type 1).

In the 1975-1979 sub-period real change (13044 million dinars) continued to exceed hypothetical regional share (12491 million dinars), because the total positive differential shift (635) exceeded the negative structural shift (-82 million dinars) by many times. Agriculture contributed the most to both the negative structural and positive differential shifts (-420 and 495 million dinars, respectively).

In this period there are three sectors characterized by the most favorable Type 4 allocation effect – agriculture, construction and trade. Three sectors are of the Type 3 allocation effect – artisanship, catering and tourism, and “other activities.” Forestry and transport and communication were Type 2 sectors, while manufacturing was the only sector showing the most unfavorable combination – specialization in a comparatively inferior sector (Type 1 allocation effect).

In the 1979-1983 sub-period real change in the value of fixed assets (8385 million dinars) in Macedonia was for the first time smaller than hypothetical regional share (9991 million dinars). The difference was caused by the negative values of both shifts. Agriculture was the most responsible (-366 million dinars) for the negative value of the structural shift (-212 million dinars), while manufacturing (-675 million dinars) contributed the most to the negative differential shift (-1394 million dinars).

In this sub-period Macedonia specialized in one sector (construction) in which it had comparative advantages (Type 4 allocation effect). Catering and tourism was the only sector of the Type 3 allocation effect. Type 2 allocation effect sectors predominated; there were as many as five: forestry, manufacturing, artisanship, transport and communication and “other activities.” Agriculture and trade were two

sectors which the republic in this period specialized in and which were comparatively inferior.

In the final sub-period (1983-1990), much like in the previous one, Macedonia registered lower real change in the value of fixed assets (8741 million dinars) than “expected” (regional share was 9756 million dinars). This was due to the higher total differential shift (-1083 million dinars) over a modest positive structural shift (68 million dinars). Transport and communication contributed the most to the positive structural shift (337 million dinars), while agriculture impacted the most on the negative total differential shift (-484 million dinars).

In this sub-period Macedonia did not specialize in any comparatively good sector. Three sectors were of the Type 3 allocation effect – forestry, manufacturing and “other activities.” There was an equal number of comparatively inferior, non-specialized sectors (Type 2): artisanship, transport and communication and catering and tourism. Agriculture, construction and trade were sectors in which the republic specialized, although they were comparatively inferior (Type 1).

Table 1.21 FIXED ASSETS OF THE MACEDONIAN ECONOMY:
SHISHA RESULTS

Sector	Real change	Proportional share	Structural shift	Differential shift			
				Total	Net differential shift	Алокациони ефект	
						Amount	Type
1952-1960							
TOT	4660	3305	-309	1664	2119	-455	-
AGR+	694	112	146	435	334	101	4
FOR	-1	25	-1	-25	-46	21	2
IND	2904	1115	382	1408	1942	-535	3
CON	62	122	28	-88	-55	-33	1
TRD	17	16	8	-7	-9	2	2
COM	781	1729	-911	-37	-28	-8	1
CME	137	93	18	26	29	-3	3
HTU	37	62	13	-38	-36	-2	1
OTHER	29	30	9	-10	-12	1	2
1960-1965							
TOT	5837	4749	335	752	1389	-636	-
AGR+	848	457	791	-400	-173	-227	1
FOR	64	16	-2	50	207	-157	3

IND	3269	2337	82	850	929	-79	3
CON	347	115	86	146	154	-8	3
TRD	57	20	16	21	38	-17	3
COM	586	1570	-773	-212	-197	-14	1
CME	299	137	75	87	102	-16	3
HTU	147	61	54	32	48	-16	3
OTHER	220	36	5	179	280	-101	3
1965–1970							
TOT	7839	6617	75	1148	1079	69	-
AGR+	1358	768	325	265	153	112	4
FOR	14	43	-10	-18	-37	19	2
IND	4195	3438	-94	851	893	-41	3
CON	506	254	97	154	130	24	4
TRD	44	43	-6	8	12	-4	3
COM	968	1572	-763	159	170	-11	3
CME	511	251	313	-53	-57	4	2
HTU	318	118	259	-60	-85	25	2
OTHER	-75	131	-46	-160	-101	-59	1
1970–1975							
TOT	13023	10454	-148	2717	2990	-272	-
AGR+	1424	1424	-281	281	157	124	4
FOR	127	50	-10	86	218	-132	3
IND	7776	5489	221	2066	2125	-59	3
CON	454	498	135	-179	-137	-43	1
TRD	131	64	30	37	57	-19	3
COM	1581	2064	-419	-64	-69	6	2
CME	1029	496	56	477	570	-93	3
HTU	499	270	116	113	187	-74	3
OTHER	2	99	4	-101	-118	18	2
1975–1979							
TOT	13044	12491	-82	635	535	101	-
AGR+	1652	1577	-420	495	279	215	4
FOR	39	83	-28	-16	-28	11	2
IND	7317	6891	687	-260	-258	-2	1
CON	723	536	33	154	142	12	4

TRD	172	95	69	8	12	-3	3
COM	1411	2116	-386	-319	-379	60	2
CME	1056	738	20	297	296	1	4
HTU	465	380	-82	167	266	-99	3
OTHER	209	75	24	110	205	-96	3
1979–1983							
TOT	8385	9991	-212	-1394	-1509	114	-
AGR+	727	1263	-366	-171	-90	-81	1
FOR	27	56	-1	-29	-54	25	2
IND	5057	5537	195	-675	-683	9	2
CON	426	462	-101	64	55	9	4
TRD	78	91	33	-46	-64	19	2
COM	1192	1527	112	-448	-562	114	2
CME	584	650	-35	-30	-27	-3	1
HTU	257	318	-68	7	10	-3	3
OTHER	39	87	18	-67	-93	27	2
1983–1990							
TOT	8741	9756	68	-1083	-20	-226	-
AGR+	666	928	222	-484	-254	-230	1
FOR	66	52	9	6	11	-5	3
IND	5118	5477	-563	204	205	-1	3
CON	369	458	104	-193	-159	-35	1
TRD	23	89	6	-72	-107	35	2
COM	1683	1476	337	-130	-167	37	2
CME	322	641	-179	-140	-125	-15	1
HTU	146	309	-44	-119	-166	47	2
OTHER	220	79	76	65	101	-36	3

SLOVENIA

Table 1.22 shows the results of the shift-share analysis of fixed assets in Slovenia. In all of the sub-periods (barring three – 1970–1975, 1979–1983 and 1983–1990) real change was smaller than the proportional share that would have been achieved had the growth of fixed assets been equal to the average growth of fixed assets in Yugoslavia as a whole.

In the first sub-period (1952–1960) the structural shift was positive (23 million dinars) while the total differential shift was negative (-4324 million dinars). This is to say that in this sub-period in Slovenia fast growing sectors predominated in terms of Yugoslavia as a whole, but also that the growth of fixed assets, influenced by regional factors, was below the Yugoslav average. Consequently, real change (12323 million dinars) was smaller than proportional share (16624). Transport and communication saw the most negative structural shift (causing a loss of 3456 million dinars in the value of fixed assets) which to a substantial extent, although not entirely, annulled the positive sectoral shifts, the highest being in manufacturing (2957). Manufacturing had the biggest negative differential shift, causing fixed assets to decrease by 3043 million dinars due to slower growth.

In this sub-period in Slovenia there were no Type 4 allocation effect sectors. In three sectors (agriculture, artisanship and trade) the republic showed itself as comparatively good, but without specializing in any (Type 3 allocation effect). Five sectors (forestry, construction, transport and communication, catering and tourism, and “other activities”) were of the Type 2 allocation effect, i.e. were comparatively bad, but Slovenia did not specialize in them. Finally, in this sub-period Slovenia specialized in one sector (manufacturing), in which it was comparatively bad (Type 1 allocation effect).

From 1960 to 1965, the negative total effect of the two shifts was the consequence of their convergent negative effect, both of the structural and differential shifts. Unfavorable structure lowered the value of fixed assets by 431 million dinars, while the negative total differential shift stood at 3711 million dinars. Transport and communication contributed the most to the negative structural shift (-2612 million dinars), whereas the negative total differential shift mostly owed to manufacturing (-3647 million dinars).

In this sub-period only artisanship was of the Type 4 allocation effect. Forestry, construction, trade, catering and tourism, and “other activities” were characterized by the Type 3 allocation effect. Comparatively bad sectors which the republic did not specialize in (Type 2) were agriculture and transport and communication. The worst variant – specialization in comparatively bad sectors – Type 1 – appeared in the case of manufacturing.

Smaller real change (20562 million dinars) in the 1965–1970 sub-period compared to hypothetical regional share (20973 million dinars) was due to the negative structural (-385) and negative total differential shifts (-25). Transport and communication were the most responsible for the negative structural shift (-2642), while agriculture contributed the most to the negative differential shift (-712 million dinars).

In this sub-period Slovenia specialized in two comparatively good sectors: transport and communication and trade. Forestry, construction, catering and tourism, and “other activities” were Type 3 allocation effect sectors. Agriculture was the only Type 2 allocation effect sector, whereas manufacturing and artisanship were the most unfavorable sectors characterized by the Type 1 allocation effect.

In the 1975–1979 sub-period real change (32430 million dinars) was higher than proportional regional share (31125 million dinars). The difference was the result of a positive structural (194) and positive total differential shift (1111 million dinars). Manufacturing contributed the most to the positive structural shift (698 million dinars), while trade crucially impacted on the positive total differential shift (950 million dinars).

In this sub-period Slovenia specialized in three comparatively good sectors – manufacturing, artisanship and trade. Construction was the only Type 3 allocation effect sector. Agriculture, catering and tourism, and “other activities” were of the Type 2 allocation effect, while forestry and transport and communication were not comparatively good, although the republic specialized in them (Type 1).

In the 1975–1979 sub-period real change in the value of fixed assets (34717 million dinars) was smaller than hypothetical regional share (34945 million dinars), which was the consequence of a negative total differential shift (-735) that exceeded the positive structural shift (506). Manufacturing contributed the most to the positive structural shift (1965 million dinars), while trade was responsible for the negative total differential shift (-1092 million dinars).

In this sub-period two sectors were characterized by the most favorable Type of allocation effect – construction and transport and communication. Three sectors – forestry, catering and tourism, and “other activities” were of the Type 3 allocation effect. Agriculture is the only Type 2 allocation effect sector, while in the case of manufacturing, artisanship and trade the combination was the least favorable one – specialization in a comparatively bad sector (Type 1 allocation effect).

In the 1979–1983 sub-period real change in the value of fixed assets (32873 million dinars) in Slovenia exceeded hypothetical regional share (27588 million dinars). The difference was the result of both a positive structural shift (316) and a positive total differential shift (4973 million dinars). Manufacturing influenced both the positive structural and the positive total differential shift (562 and 6222 million dinars, respectively) the most.

In this sub-period Slovenia specialized in three sectors (manufacturing, artisanship and transport and communication) in which it had comparative advantages (Type 4 allocation effect). Agriculture and “other activities” were Type 3 allocation effect sectors. Catering and tourism was the only sector that Slovenia did not specialize in, which, in addition, was comparatively inferior (Type 2). There were three sectors in which the republic specialized in the observed sub-period, and which were comparatively bad (Type 1) – forestry, construction and trade.

In the last sub-period (1983–1990) Slovenia registered higher real change in the value of fixed assets (29680 million dinars) in relation to the “expected” level (regional share amounted to 2866 million dinars). This was the result of the positive differential shift (1437 million dinars) and the substantially smaller negative structural shift (-363 million dinars). Manufacturing contributed the most (-1763 million dinars) to the negative structural shift (-288 million dinars),

while construction was responsible for the positive differential shift (668 million dinars).

In this sub-period Slovenia specialized in three comparatively good sectors – manufacturing, trade and artisanship. Type 3 allocation effect sectors were agriculture, forestry, construction and “other activities.” Catering and tourism was a comparatively bad and non-specialized sector (Type 2). Transport and communication was a sector which the republic specialized in, although it was comparatively inferior (Type 1).

Table 1.22 FIXED ASSETS OF THE SLOVENIAN ECONOMY:
SHISHA RESULTS

Sector	Real change	Proportional share	Structural shift	Differential shift			
				Total	Net differential shift	Allocation effect	
						Amount	Type
1952–1960							
TOT	12323	16624	23	-4324	-3764	-560	-
AGR+	745	194	252	299	670	-371	3
FOR	75	96	-5	-15	-37	22	2
IND	8550	8636	2957	-3043	-2726	-317	1
CON	267	292	66	-91	-120	29	2
TRD	245	80	40	126	163	-37	3
COM	1791	6556	-3456	-1309	-1346	37	2
CME	536	406	79	52	67	-15	3
HTU	76	218	47	-189	-253	65	2
OTHER	38	148	45	-154	-181	26	2
1960–1965							
TOT	13612	17754	-431	-3711	-2940	-771	-
AGR+	1034	539	933	-437	-599	162	2
FOR	297	104	-16	208	492	-283	3
IND	7126	10409	363	-3647	-3347	-300	1
CON	776	340	256	181	242	-61	3
TRD	372	188	154	31	22	9	4
COM	2266	5308	-2612	-430	-443	13	2
CME	890	563	310	17	18	-1	3
HTU	680	185	162	332	614	-282	3
OTHER	171	118	18	35	62	-27	3

1965–1970							
TOT	20562	20973	-385	-25	-254	229	-
AGR+	599	921	390	-712	-1088	377	2
FOR	328	223	-54	159	196	-37	3
IND	10998	11905	-327	-580	-556	-23	1
CON	900	637	244	18	20	-1	3
TRD	81	326	-49	-196	-124	-72	1
COM	3095	5443	-2642	293	287	6	4
CME	2844	875	1093	876	856	20	4
HTU	1534	466	1022	47	53	-7	3
OTHER	183	176	-62	69	102	-33	3
1970–1975							
TOT	32430	31125	194	1111	458	653	-
AGR+	562	1224	-242	-421	-813	393	2
FOR	300	382	-74	-8	-8	-0	1
IND	18747	17351	698	697	675	22	4
CON	1864	1075	292	497	522	-26	3
TRD	599	372	171	56	44	12	4
COM	5193	7027	-1427	-407	-388	-19	1
CME	3432	2231	251	950	753	197	4
HTU	1702	1197	513	-7	-8	1	2
OTHER	31	267	11	-246	-319	73	2
1975–1979							
TOT	34717	34945	506	-735	-173	-562	-
AGR+	759	1122	-299	-64	-142	78	2
FOR	273	394	-132	11	11	-0	3
IND	21363	19718	1965	-320	-310	-10	1
CON	1582	1470	90	21	20	1	4
TRD	645	493	358	-205	-156	-49	1
COM	6358	7136	-1301	523	516	7	4
CME	1885	2896	80	-1092	-775	-317	1
HTU	1264	1504	-324	84	94	-11	3
OTHER	588	212	68	308	570	-262	3
1979–1983							
TOT	32873	27585	316	4973	5180	-207	-

AGR+	637	812	-235	60	134	-75	3
FOR	268	287	-3	-16	-16	-0	1
IND	22714	15931	562	6222	6046	176	4
CON	118	1186	-259	-809	-755	-54	1
TRD	639	421	153	65	55	11	4
COM	5922	5482	404	37	35	1	4
CME	1302	2081	-114	-666	-523	-143	1
HTU	539	1140	-244	-357	-397	40	2
OTHER	735	245	51	438	600	-162	3
1983–1990							
TOT	29680	28606	-363	1437	-2035	-233	-
AGR+	1218	737	176	305	591	-286	3
FOR	397	285	49	63	66	-3	3
IND	15566	17162	-1763	167	157	10	1
CON	1904	1007	229	668	733	-64	3
TRD	729	460	30	239	201	38	4
COM	5955	5580	1276	-900	-896	-4	1
CME	1688	1956	-547	279	240	40	1
HTU	847	1041	-149	-45	-55	10	2
OTHER	992	330	318	344	375	-31	2

SERBIA

The results of the shift-share analysis of fixed assets in Serbia are shown in *Table 1.23*. Much like in Slovenia, in Serbia too, real change exceeded proportional share in only three periods (1960-1965, 1965-1970 and 1983-1990).

In the first sub-period (1952–1960) both the structural and differential shifts were negative (-166 and -5381 million dinars, respectively). This means that in this sub-period in Serbia, in terms of Yugoslavia as a whole, slow growing sectors predominated and that the growth of fixed assets influenced by regional factors was below the Yugoslav average. Transport and communication (with a loss of 6287 million dinars in the value of fixed assets) showed the biggest negative structural shift and also the biggest negative differential shift (-3728 million dinars).

In this sub-period three sectors (agriculture, trade and “other activities”) were characterized by the Type 4 allocation effect. In three sectors (construction, artisan-

ship and catering and tourism) the republic appeared comparatively good, but did not specialize in them (Type 2 allocation effect). In this sub-period Serbia specialized in one sector (transport and communication), in which it was comparatively bad (Type 1 allocation effect).

In the 1960–1965 sub-period the total positive effect of the two shifts was the consequence of their positive results. Owing to positive structure the value of fixed assets went up by 1743 million dinars, whereas the positive total differential shift was 5394 million dinars. Agriculture contributed the most to the positive structural shift (3539 million dinars), while manufacturing's contribution to the positive total differential shift amounted to 5606 million dinars.

In this sub-period there were three Type 4 allocation effect sectors – agriculture, construction and trade. Forestry and manufacturing were Type 3 sectors. Comparatively inferior sectors which the republic did not specialize in (Type 2) were transport and communication and catering and tourism. The worst variant (specialization in comparatively bad sectors – Type 1) appeared in the case of artisanship and “other activities.”

Real change (46961 million dinars) in the 1965–1970 sub period was again higher than hypothetical regional share (42946 million dinars), which was the result of both shifts being positive (1017 and 2998 million dinars, respectively).

Trade was to be credited for the positive structural shift (2728 million dinars), while manufacturing contributed the most to the positive differential shift (3109 million dinars).

In this sub-period Serbia specialized in three comparatively good sectors – agriculture, manufacturing and “other activities.” Forestry, artisanship and transport and communication were Type 3 allocation effect sectors. Catering and tourism was the sole Type 2 sector, whereas construction and trade fared mostly unfavorably, being of Type 1.

In the 1970–1975 sub-period real change (65290 million dinars) was smaller than proportional regional share (66013 million dinars). The difference was the consequence of the negative structural (-514) and negative differential shifts (-209 million dinars). Transport and communication were the sector that was the most responsible for the negative structural shift (-2325), whereas trade crucially impacted on the negative total differential shift (-2264 million dinars).

In this sub-period Serbia “specialized” (!) in one comparatively good sector – “other activities.” The republic did not specialize in three comparatively good sectors (Type 3) – forestry, transport and communication and hospitality. Artisanship was the only Type 2 allocation effect sector, whereas four sectors (agriculture, manufacturing, construction and trade) were not comparatively good, although the republic specialized in them (Type 1).

In the 1975–1979 sub-period real change in the value of fixed assets (69650 million dinars) was smaller than hypothetical regional share (72881 million dinars), resulting from the negative total differential shift being higher (-3476) than

the positive structural shift (245). Manufacturing contributed the most to both the positive structural and negative differential shifts (4029 and -2781 million dinars, respectively).

In this sub-period in Serbia there were sectors of only two allocation effect Types – 3 and 1. Five sectors were Type 3 – forestry, artisanship, transport and communication, trade and catering and tourism, whereas the remaining four sectors – agriculture, manufacturing, construction and “other activities” – were Type 1.

In the 1979–1983 sub-period real change in the value of fixed assets (48148 million dinars) in Serbia was substantially smaller than hypothetical regional share (56960 million dinars). The difference stemmed from the negative value of both shifts (the structural was -259, and the total differential shift -8553 million dinars). The negative structural shift was mostly due to agriculture (-1654 million dinars), while manufacturing impacted in the same way on the total differential shift (-4418 million dinars).

In this sub-period Serbia did not specialize in any sector in which it had comparative advantages (Type 4 allocation effect). Forestry, construction and artisanship were Type 3 sectors. Transport and communication, trade and catering and tourism were sectors which Serbia did not specialize in and which, besides, were comparatively inferior (Type 2). The sectors in which the Republic specialized in this sub-period and which were comparatively bad (Type 1) were agriculture, manufacturing and “other activities.”

In the final surveyed sub-period (1983–1990) a smaller real change in the value of fixed assets occurred (53049 million dinars) in relation to the “expected” value (regional share equaled 55716 million dinars). That was the consequence of the negative total differential shift (-3604 million dinars) being higher than the positive structural shift (937 million dinars). Transport and communication contributed the most to the positive structural shift (2263 million dinars), while manufacturing was the most responsible for the negative total differential shift (-1842 million dinars).

In this, much like in the preceding period, Serbia did not specialize in any comparatively good sector. Type 3 allocation effect sectors included forestry and artisanship. Transport and communication, artisanship, trade and catering and tourism were comparatively bad, but also non-specialized sectors (Type 2). Agriculture, manufacturing, construction and “other activities” were sectors which the republic specialized in although they were comparatively inferior (Type 1).

Table 1.23 FIXED ASSETS OF THE SERBIAN ECONOMY: SHISHA RESULTS

Sector	Real change	Proportional share	Structural shift	Differential shift			
				Total	Net differential shift	Allocation effect	
						Amount	Type
1952–1960							
TOT	22419	27966	-166	-5381	-5151	-230	-
AGR+	2623	906	1180	537	432	105	4
FOR	-13	67	-4	-76	-452	376	2
IND	13975	12947	4432	-3405	-3423	18	2
CON	1041	485	110	446	596	-150	3
TRD	258	158	79	20	22	-2	3
COM	1911	11927	-6287	-3728	-3546	-183	1
CME	1271	1000	194	78	68	10	4
HTU	412	161	34	217	662	-446	3
OTHER	941	315	95	530	489	41	4
1960–1965							
TOT	37937	30800	1743	5394	6307	-913	-
AGR+	6661	2045	3539	1077	674	403	4
FOR	157	37	-6	126	1450	-1324	3
IND	22417	16244	567	5606	5719	-113	3
CON	1800	894	674	232	204	28	4
TRD	321	247	202	-128	-121	-6	1
COM	3361	8912	-4385	-1166	-1241	76	2
CME	2303	1360	750	193	149	44	4
HTU	428	333	292	-197	-352	154	2
OTHER	489	727	110	-348	-174	-174	1
1965–1970							
TOT	46961	42946	1017	2998	3417	-418	-
AGR+	6861	4749	2009	103	62	40	4
FOR	174	103	-25	96	527	-431	3
IND	26211	23754	-652	3109	3062	47	4
CON	2099	1567	601	-69	-61	-8	1
TRD	359	352	-53	60	72	-12	3
COM	4894	8936	-4337	294	360	-65	3

CME	4201	2184	2728	-711	-570	-141	1
HTU	1444	473	1038	-67	-153	87	2
OTHER	718	828	-291	182	118	64	4
1970-1975							
TOT	65290	66013	-514	-209	2197	-2406	-
AGR+	5555	8083	-1596	-932	-579	-353	1
FOR	153	187	-36	2	10	-8	3
IND	36194	36623	1474	-1904	-1853	-51	1
CON	2920	2590	704	-374	-346	-28	1
TRD	567	529	243	-205	-239	34	2
COM	13316	11448	-2325	4193	5209	-1016	3
CME	2418	4208	474	-2264	-2017	-247	1
HTU	2336	1162	498	676	1644	-968	3
OTHER	1831	1184	49	598	369	228	4
1975-1979							
TOT	69650	72881	245	-3476	-1199	-2278	-
AGR+	4865	8061	-2147	-1049	-676	-373	1
FOR	340	195	-65	210	894	-684	3
IND	41672	40424	4029	-2781	-2742	-38	1
CON	2318	2986	184	-852	-820	-31	1
TRD	1380	599	435	345	450	-105	3
COM	12166	13344	-2432	1254	1380	-126	3
CME	4616	4029	112	476	506	-31	3
HTU	1583	1703	-367	247	515	-267	3
OTHER	710	1541	497	-1328	-705	-623	1
1979-1983							
TOT	48148	56960	-259	-8553	-7931	-622	-
AGR+	3564	5713	-1654	-495	-327	-168	1
FOR	387	184	-2	205	657	-452	3
IND	28940	32222	1136	-4418	-4383	-35	1
CON	1942	2223	-485	204	209	-6	3
TRD	1002	635	231	135	155	-20	3
COM	7685	10308	759	-3382	-3585	203	2
CME	2848	3307	-180	-279	-284	6	2
HTU	1019	1322	-283	-20	-39	19	2
OTHER	761	1047	219	-504	-334	-170	1

1983–1990							
TOT	53049	55716	937	-3604	-3626	83	-
AGR+	4498	4122	985	-609	-411	-198	1
FOR	342	220	38	84	221	-137	3
IND	26716	31828	-3270	-1842	-1820	-22	1
CON	2181	2184	496	-499	-491	-8	1
TRD	744	701	46	-3	-3	0	3
COM	12046	9899	2263	-115	-126	11	2
CME	1810	3241	-907	-524	-528	4	2
HTU	1146	1275	-183	54	103	-50	2
OTHER	1554	1002	965	-413	-289	-124	1

Central Serbia

Table 1.24 provides the findings of the shift-share analysis of fixed assets in central Serbia. In almost all of the sub-periods (except for 1965–1970 and 1970–1975) real change was smaller than the proportional share that would have been achieved had the growth of fixed assets in central Serbia been equal to the average growth of fixed assets in Yugoslavia as a whole.

In the first sub-period (1952–1960) both the structural and differential shifts were negative, meaning that in this sub-period in central Serbia slow growing sectors predominated (in terms of Yugoslavia as a whole) and that the growth of fixed assets, influenced by regional factors, was below Yugoslavia's average. In terms of the first parameter, fixed assets in central Serbia were smaller by 1032 million dinars than those suggested by regional share (19419 million dinars). This share was higher by 3923 million dinars than real change (15496 million dinars). Transport and communication saw the biggest negative structural shift (causing a loss of 4646 million dinars in the value of fixed assets), and it also had the biggest negative differential shift (because of slower growth fixed assets went down by 3179 million dinars).

In this sub-period in central Serbia only "other activities" were characterized by the Type 4 allocational effect. In five sectors (agriculture, construction, artisanship, trade and catering and tourism) the territory appeared comparatively good, but did not specialize in any (Type 3 allocation effect). Forestry and manufacturing were Type 2 sectors, i.e. they were comparatively bad, but central Serbia did not specialize in them. Finally, in this sub-period central Serbia specialized in one sector (transport and communication) in which it fared comparatively poorly (Type 1 allocation effect).

In the 1960–1965 sub-period the negative total effect of the two shifts resulted from the negative structural shift being higher than the differential shift. Unfavorable structure lowered the value of fixed assets by 696 million dinars, while the positive total differential shift was 386 million dinars. The negative structural shift was mostly due to transport and communication (-3125 million dinars), while manufacturing was responsible for the positive total differential shift (1142 million dinars).

In this sub-period two sectors – manufacturing and trade – were Type 4 allocation effect sectors. Agriculture, forestry and artisanship were Type 3, while transport and communication and catering and tourism were Type 2. The worst variant (specialization in comparatively bad sectors – Type 1) was evidenced in the case of construction and “other activities.”

The positive differential shift (2077 million dinars) surpassing the negative structural shift (-608 million dinars) was responsible for real change (28825 million dinars) in the 1965–1970 sub-period exceeding hypothetical regional share (27357 million dinars). Transport and communication were the most responsible for the total structural shift being negative (-3053 million dinars), while the biggest contribution to the positive differential shift was by manufacturing (1326 million dinars).

In this sub-period central Serbia specialized in three comparatively good sectors – manufacturing, trade and “other activities.” Agriculture, forestry, artisanship, transport and communication and catering and tourism were of the Type 3 allocation effect. In this sub-period there was no Type 2 allocation effect sector, while construction was characterized by the least favorable Type 1 allocation effect.

In the 1970–1975 sub-period real change (44166 million dinars) also exceeded proportional regional share (41540 million dinars). The difference owed to both the structural shift and the total differential shift being positive (209 and 2415 million dinars, respectively). Manufacturing contributed the most to the positive structural shift (1000 million dinars), while transport and communication did the same when it came to the positive differential shift (5313 million dinars).

In this sub-period central Serbia specialized in one comparatively good sector – paradoxically, in “other activities.” The territory did not specialize in two comparatively good sectors (Type 3) – transport and communication and catering and tourism. Agriculture, forestry and artisanship were Type 2 allocation effect sectors, while manufacturing, construction and trade were not comparatively good, although central Serbia specialized in them (Type 1).

In the 1975–1979 sub-period real change in the value of fixed assets (43171 million dinars) was lower than hypothetical regional share (46952 million dinars, which was the consequence of the negative total differential shift being higher than the positive structural shift. Manufacturing contributed the most to both the positive structural shift (920 million dinars) and the negative differential shift (-4701 million dinars) – 2718 and 4559 million dinars, respectively.

In this sub-period there were no Type 4 and Type 2 allocation effect sectors. Five sectors – agriculture, forestry, artisanship, trade and catering and tourism were

Type 3. The most unfavorable combination – specialization in a comparatively bad sector – characterized manufacturing, construction, transport and communication and “other activities” (Type 1 allocation effect).

In the 1979–1983 sub-period real change in the value of fixed assets (27940 million dinars) in central Serbia was substantially below hypothetical regional share (36344 million dinars). The difference was the result of the negative total differential shift (-8981 million dinars) and the markedly smaller positive structural shift, which amounted to 577 million dinars. Manufacturing impacted to a large extent the positive structural shift (750 million dinars). This sector also contributed the most to the negative differential shift (-5247 million dinars).

In this sub-period central Serbia did not specialize in any sector offering comparative advantages (Type 4 allocation effect). The most numerous were Type 3 sectors, of which there were five – agriculture, forestry, construction, artisanship and catering and tourism. Trade was the only sector which central Serbia did not specialize in, and which, besides, was comparatively inferior (Type 2). There were three sectors which the territory specialized in, and which were comparatively bad (Type 1) – manufacturing, transport and communication and “other activities.”

In the final 1983–1990 sub-period, much like in the preceding one, central Serbia had smaller real change in the value of fixed assets (31835 million dinars) than “expected” (regional share was 35087 million dinars). This was the result of the negative total differential shift (-4350 million dinars) substantially exceeding the positive structural shift (280 million dinars). Transport and communication contributed the most to the positive structural shift (1684 million dinars), while manufacturing was responsible for the high negative total differential shift (-2220 million dinars).

In this sub-period, like in the preceding one, central Serbia did not specialize in any comparatively good sector. Forestry, agriculture, construction and catering and tourism were Type 3 allocation effect sectors. In this sub-period there were no comparatively inferior, non-specialized sectors. Manufacturing, artisanship, transport and communication, trade and “other activities” were sectors which this region specialized in although they were comparatively bad (Type 1).

Table 1.24 FIXED ASSETS OF THE ECONOMY OF CENTRAL SERBIA:
SHISHA RESULTS

Sector	Real change	Proportional share	Structural shift	Differential shift			
				Total	Net differential shift	Allocation effect	
						Amount	Type
1952-1960							
TOT	15496	19419	-1032	-2891	-2351	-539	-
AGR+	538	159	207	171	545	-373	3
FOR	-29	65	-4	-91	-383	292	2
IND	11253	8998	3080	-825	-828	4	2
CON	774	380	86	309	366	-57	3
TRD	93	56	28	9	19	-10	3
COM	988	8813	-4646	-3179	-2841	-338	1
CME	760	545	105	110	123	-13	3
HTU	266	131	28	107	280	-173	3
OTHER	853	272	82	498	369	129	4
1960-1965							
TOT	21037	21347	-696	386	2320	-1934	-
AGR+	1777	402	696	680	1500	-821	3
FOR	120	27	-4	97	1061	-964	3
IND	13705	12140	424	1142	1080	61	4
CON	988	677	510	-200	-161	-39	1
TRD	259	88	72	98	181	-82	3
COM	2227	6351	-3125	-999	-1035	36	2
CME	1447	778	429	240	224	15	4
HTU	241	233	204	-196	-346	151	2
OTHER	273	650	98	-476	-185	-291	1
1965-1970							
TOT	28826	27357	-608	2077	2384	-306	-
AGR+	1668	1148	485	35	56	-21	3
FOR	128	77	-19	69	321	-251	3
IND	17232	16355	-449	1326	1208	118	4
CON	1204	1015	389	-200	-175	-25	1
TRD	298	192	-29	135	189	-54	3

COM	3690	6292	-3053	452	499	-48	3
CME	3150	1309	1635	206	176	30	4
HTU	1017	304	667	46	106	-59	3
OTHER	439	665	-234	8	4	4	4
1970-1975							
TOT	44166	41540	209	2417	3345	-928	-
AGR+	1001	1958	-387	-571	-921	350	2
FOR	69	139	-27	-43	-157	113	2
IND	24445	24834	1000	-1389	-1254	-134	1
CON	1983	1604	436	-58	-54	-3	1
TRD	389	336	155	-102	-118	16	2
COM	11827	8174	-1660	5313	5816	-503	3
CME	1122	2819	317	-2014	-1686	-328	1
HTU	1734	788	338	608	1370	-762	3
OTHER	1596	887	37	673	349	323	4
1975-1979							
TOT	43171	46952	920	-4701	-2387	-2314	-
AGR+	1808	1831	-488	465	850	-385	3
FOR	275	130	-43	189	779	-590	3
IND	25546	27376	2728	-4559	-4277	-282	1
CON	1614	1911	118	-415	-402	-13	1
TRD	809	391	284	133	172	-38	3
COM	8380	10349	-1886	-83	-75	-7	1
CME	3229	2522	70	637	697	-61	3
HTU	1171	1208	-260	223	422	-199	3
OTHER	339	1233	398	-1292	-552	-740	1
1979-1983							
TOT	27940	36344	577	-8981	-8059	-921	-
AGR+	1060	1443	-418	35	58	-23	3
FOR	180	132	-1	48	138	-89	3
IND	16772	21268	750	-5247	-5032	-215	1
CON	1252	1450	-316	118	119	-1	3
TRD	629	396	144	90	105	-15	3
COM	5215	7776	573	-3134	-2810	-324	1
CME	1712	2141	-117	-312	-314	2	2
HTU	746	948	-203	1	1	-1	3
OTHER	376	790	165	-580	-325	-255	1

1983–1990							
TOT	31835	35087	280	-3532	-4350	-161	-
AGR+	1523	1236	295	-8	-12	3	2
FOR	199	141	25	33	88	-52	3
IND	16284	20622	-2119	-2220	-2131	-88	1
CON	1022	1422	323	-723	-688	-35	1
TRD	556	438	28	90	98	-8	3
COM	8607	7367	1684	-444	-411	-34	1
CME	1260	2076	-581	-235	-233	-2	1
HTU	980	917	-131	195	329	-135	2
OTHER	1119	722	696	-299	-183	-116	1

Kosovo and Metohia

The results of the shift-share analysis of fixed assets in Kosovo and Metohia are shown in *Table 1.25*. In all of the sub-periods except for the first (1952–1960) and penultimate (1979–1983) real change exceeded the proportional share that would have been achieved had the growth of fixed assets in Kosovo and Metohia been equal to average Yugoslav growth.

In the first sub-period (1952–1960) the structural shift was positive, while the total differential shift was negative. This is to say that in this sub-period in Kosovo and Metohia, in terms of Yugoslavia as a whole, fast growing sectors predominated, while the growth of fixed assets influenced by regional factors was below the Yugoslav average. Owing to the positive structural shift (30 million dinars) and the negative total differential shift (-83 million dinars), real change in the value of fixed assets in Kosovo and Metohia (1340 million dinars) was higher by 54 million dinars than suggested by regional share (1394 million dinars). The highest positive structural shift (251 million dinars) and the highest negative differential shift (-274 million dinars) were seen in manufacturing.

In this sub-period in Kosovo and Metohia, one sector – agriculture – was characterized by the Type 4 allocation effect. In as many as seven sectors (forestry, construction, artisanship, transport and communication, trade, catering and tourism, and “other activities”) the Province fared comparatively well, but did not specialize in them (Type 3 allocation effect). There were no Type 2 allocation effect sectors. In this sub- period the province specialized in one sector (manufacturing), in which it was comparatively bad (Type 1 allocation effect).

In the 1960–1965 sub-period the positive total effect of the two shifts was the result of both shifts – structural and differential – being positive. Favorable structure raised the value of fixed assets by 2 million dinars, while the positive total differential shift amounted to 1561 million dinars. The biggest contribution to the positive structural shift was made by agriculture (184 million dinars), while manufacturing did likewise when it came to the positive total differential shift (1499 million dinars).

In this sub-period, much like in the preceding one, agriculture was the sole Type 4 allocation effect sector. Again, there were seven Type 3 allocation effect sectors – forestry, manufacturing, construction, artisanship, trade, catering and tourism, and “other activities.” In this sub-period there were also no Type 2 allocation effect sectors. Specialization in a comparatively inferior, Type 1 sector appeared only in the case of transport and communication.

Real change (3871 million dinars) in the sub-period from 1965 to 1970 was substantially above hypothetical regional share (2852 million dinars), owing to the positive total differential shift (1059 million dinars) being several times higher than the negative structural shift (-40 million dinars).

Transport and communication were the most responsible for the overall negative structural shift (-268 million dinars), while manufacturing contributed the most (889 million dinars) to the positive total differential shift.

In this sub-period Kosovo and Metohia specialized in in two comparatively good sectors (agriculture and manufacturing). Type 3 allocation effect sectors were forestry, construction, artisanship, trade and “other activities.” Transport and communication and catering and tourism were Type 2 allocation effect sectors, whereas there were no Type 1 sectors in this sub-period in the province.

In the 1970–1975 sub-period, as well, real change (5674 million dinars) exceeded proportional regional share (4737 million dinars). The difference is the result of a positive total differential shift (938 million dinars) and an almost negligible negative structural shift (-1 million dinars). Transport and communication were responsible the most for the negative structural shift (-126), whereas manufacturing was crucial in positively impacting on the total differential shift (901 million dinars).

In this sub-period Kosovo and Metohia specialized in one comparatively good sector – manufacturing. The province did not specialize in four comparatively good sectors (Type 3) – forestry, construction, transport and communication and trade. Artisanship, catering and tourism, and “other activities” were of the Type 2 allocation effect, while agriculture, despite the province specializing in it, did not fare comparatively well (Type 1).

In the 1975–1979 sub-period real change in the value of fixed assets (6136) exceeded hypothetical regional share (5580 million dinars), which resulted from both shifts being positive. Manufacturing contributed the most to the positive structural shift (156 million dinars) and the positive differential shift (400 million dinars): 381 and 257 million dinars, respectively.

In this sub-period only one sector – manufacturing – was characterized by the most favorable Type of allocation effect. Five sectors were Type 3 – forestry, artisanship, transport and communication, trade and “other activities.” There were no Type 2 sectors, while agriculture had the most unfavorable combination – specialization in a comparatively inferior sector (Type 1 allocation effect).

In the 1979-1983 sub-period real change in the value of fixed assets (4258 million dinars) in Kosovo and Metohia was smaller than the supposed regional share (4527 million dinars). The difference was the result of the negative total differential shift (-282 million dinars) prevailing over the positive structural shift, which amounted to a meager 14 million dinars. Manufacturing substantially influenced the positive structural shift (111 million dinars). It was also responsible for the differential shift being negative (-419 million dinars).

In this sub-period Kosovo and Metohia did not specialize in any sector with comparative advantages (Type 4 allocation effect). The most numerous were Type 3 sectors: forestry, construction, transport and communication and trade. Artisanship, catering and tourism, and “other activities” were sectors which the province did not specialize in, being, besides, comparatively bad (Type 2). There were two sectors which Kosovo and Metohia specialized in, which also were comparatively inferior (Type 1) – agriculture and manufacturing.

In the final, 1983-1990 sub-period, Kosovo-Metohia saw bigger real change in the value of fixed assets (5817 million dinars) than “expected” (a regional share of 4499 million dinars). This was the consequence of the total differential shift being positive (1433 million dinars) and surpassing the negative structural shift (-115 million dinars). Manufacturing was the most responsible for the negative structural shift (-320 million dinars), while transport and communication mostly contributed to the positive total differential shift (129 million dinars more).

In this sub-period Kosovo and Metohia specialized in one comparatively good sector – agriculture. Type 3 allocation effect sectors continued to predominate. There were six – forestry, construction, transport and communication, trade, catering and tourism, and “other activities.” The number of comparatively bad, non-specialized sectors, was reduced to one – artisanship. Manufacturing was the sector which the province specialized in, although it was comparatively inferior (Type 1).

Table 1.25 FIXED ASSETS IN THE ECONOMY
OF KOSOVO AND METOHIA: SHISHA RESULTS

Sector	Real change	Proportional share	Structural shift	Differential shift			
				Total	Net differential shift	Allocation effect	
						Amount	Type
1952–1960							
TOT	1340	1394	30	-83	87	-170	-
AGR+	135	49	63	23	17	6	4
FOR	2	1	-0	1	29	-27	3
IND	710	733	251	-274	-243	-32	1
CON	48	16	4	28	58	-29	3
TRD	16	5	3	8	15	-6	3
COM	360	563	-297	94	94	-0	3
CME	42	15	3	24	69	-45	3
HTU	14	5	1	8	38	-31	3
OTHER	13	7	2	4	9	-5	3
1960–1965							
TOT	3221	1658	2	1561	1752	-191	-
AGR+	317	107	184	26	17	9	4
FOR	7	2	-0	6	78	-72	3
IND	2405	875	31	1499	1529	-29	3
CON	132	37	28	67	77	-10	3
TRD	25	12	10	3	3	-0	3
COM	172	570	-280	-117	-105	-12	1
CME	107	33	18	56	95	-39	3
HTU	39	11	10	18	53	-35	3
OTHER	17	12	2	4	6	-3	3
1965–1970							
TOT	3871	2852	-40	1059	919	140	-
AGR+	610	234	99	277	227	50	4
FOR	16	5	-1	13	102	-90	3
IND	2667	1828	-50	889	755	134	4
CON	139	91	35	13	13	-0	3
TRD	29	22	-3	11	14	-3	3
COM	120	552	-268	-164	-215	51	2

CME	190	77	96	18	27	-9	3
HTU	71	27	59	-15	-41	26	2
OTHER	29	17	-6	18	36	-18	3
1970-1975							
TOT	5674	4737	-1	938	823	114	-
AGR+	375	526	-104	-47	-32	-15	1
FOR	30	12	-2	20	95	-75	3
IND	4150	3124	126	901	738	163	4
CON	308	159	43	106	115	-9	3
TRD	38	36	16	-14	-17	3	2
COM	511	621	-126	16	26	-10	3
CME	191	168	19	5	7	-3	3
HTU	71	61	26	-16	-54	37	2
OTHER	0	31	1	-33	-55	22	2
1975-1979							
TOT	6136	5580	156	400	1376	-976	-
AGR+	108	529	-141	-280	-211	-69	1
FOR	19	20	-7	6	19	-13	3
IND	4462	3824	381	257	205	52	4
CON	65	229	14	-178	-171	-6	1
TRD	103	40	29	33	50	-16	3
COM	772	649	-118	241	417	-176	3
CME	258	194	5	59	99	-41	3
HTU	291	71	-15	235	897	-662	3
OTHER	58	24	8	27	70	-44	3
1979-1983							
TOT	4258	4527	14	-282	30	-312	-
AGR+	66	331	-96	-170	-154	-16	1
FOR	69	15	-0	53	161	-108	3
IND	2848	3155	111	-419	-337	-82	1
CON	207	147	-32	92	113	-22	3
TRD	41	45	16	-21	-27	6	2
COM	679	539	40	100	162	-61	3
CME	288	167	-9	130	210	-79	3
HTU	34	102	-22	-46	-94	48	2
OTHER	29	26	5	-2	-4	2	2

1983–1990							
TOT	5817	4499	-115	1433	2177	-393	-
AGR+	278	260	62	-44	-38	-6	4
FOR	57	25	4	28	53	-25	3
IND	2214	3115	-320	-581	-474	-107	1
CON	273	158	36	80	87	-8	3
TRD	32	44	3	-15	-21	6	2
COM	954	565	129	260	402	-142	3
CME	266	188	-53	131	183	-53	3
HTU	84	91	-13	7	14	-9	3
OTHER	56	27	26	4	9	-5	3

Vojvodina

The shift-share analysis results of fixed assets in Vojvodina are shown in *Table 1.26*. In only two sub-periods (1960–1965 and 1965–1970) real change in the value of fixed assets exceeded the proportional share that would have been achieved had their growth in Vojvodina equaled the average Yugoslav growth of fixed assets.

In the first sub-period (1952–1960) the structural shift was positive (837 million dinars), whereas the total differential shift was negative (-2407 million dinars). This is to say that in Vojvodina in this sub-period – in terms of Yugoslavia as a whole – fast growing sectors predominated, but also that the growth of fixed assets influenced by regional factors was below the Yugoslav average. The biggest positive structural shift was in manufacturing (1101 million dinars), but this sector also had the biggest negative differential shift (-2306 million dinars).

In this sub-period in Vojvodina there were two Type 4 allocation effect sectors – agriculture and artisanship. Four sectors in the province appeared comparatively good, but the province did not specialize in any (Type 3) – forestry, construction, catering and tourism, and “other activities.” Manufacturing and transport and communication were of the Type 2 allocation effect. In this period Vojvodina also specialized in trade, where it did not fare well (Type 1 allocation effect).

In the 1960–1965 sub-period the positive total effect of the two shifts was the consequence of both the structural and the differential shifts being positive. The favorable structure caused growth in the value of fixed assets to be increased by 2437 million dinars, and the positive total differential shift by 3447 million dinars. Agriculture contributed the most to the positive structural shift (2659 million dinars),

while manufacturing did the same when it came to the positive total differential shift (2965 million dinars).

In this sub-period agriculture was the only sector characterized by the Type 4 allocation effect, while Type 3 was evident in forestry, manufacturing, construction and “other activities.” Comparatively inferior sectors which the province did not specialize in (Type 2) were transport and communication and catering and tourism. Specialization in comparatively bad sectors – Type 1 – appeared in the case of artisanship and trade.

Real change (14264 million dinars) exceeding hypothetical regional share (12737 million dinars) in the 1965–1970 sub-period was the result of a higher positive structural shift (1665) and smaller negative total differential shift (-138 million dinars). Agriculture contributed the most to the positive structural shift (1424), whereas trade was mostly responsible for the negative differential shift (-935 million dinars).

In this sub-period Vojvodina specialized in one comparatively good sector – construction. Forestry, manufacturing, transport and communication and “other activities” were Type 3 sectors. Catering and tourism was the only Type 2 allocation effect sector, whereas the condition of agriculture, artisanship and trade was the most unfavorable making them Type 1 allocation effect sectors.

In the 1970–1975 sub-period real change (15540 million dinars) was smaller than proportional regional share (19736 million dinars). The difference owed to the negative structural (-722) and negative total differential shifts (-3564 million dinars).

Agriculture was the most responsible for the negative structural shift (-1105 million dinars), while manufacturing crucially influenced the negative total differential shift (-1416 million dinars).

In this sub-period Vojvodina did not specialize in no comparatively good sectors; it had two sectors of Type 3 – forestry and catering and tourism. Manufacturing, artisanship and transport and communication were characterized by the Type 2 allocation effect, while agriculture, construction, trade and “other activities” were of the Type 1 allocation effect.

In the 1975–1979 sub-period real change in the value of fixed assets (20343 million dinars) was slightly smaller than hypothetical regional share (20350 million dinars). The negative structural shift was -832, and the differential slightly smaller: -825 million dinars. Agriculture was the most responsible for the negative structural shift (-1519 million dinars), while manufacturing contributed the most to the positive differential shift (1521 million dinars).

In this sub-period there were no sectors characterized by the most favorable Type of allocation effect. There were four Type 3 sectors – forestry, manufacturing, artisanship and transport and communication. “Hospitality sector” (catering and tourism) was the only Type 2 sector, whereas the most unfavorable conditions – specialization in a comparatively bad sector – were in agriculture, construction, trade and “other activities.”

In the 1979–1983 sub-period real change in the value of fixed assets (15949 million dinars) in Vojvodina was smaller than the supposed regional share (16089 million dinars). The difference was the result of the negative structural shift (-850 million dinars) being bigger than the positive differential shift (1248 million dinars).

In this sub-period Vojvodina “specialized” in one sector (“other activities”) in which it had a comparative advantage (Type 4 allocation effect). Type 3 sectors were the most numerous, four altogether – forestry, manufacturing, artisanship and catering and tourism. Construction and transport and communication were sectors which Vojvodina did not specialize in, and which, in addition, were comparatively inferior (Type 2). Vojvodina specialized in two sectors – agriculture and trade which were comparatively bad (Type 1).

In the final surveyed sub-period (1983–1990), as in the preceding one, Vojvodina registered a smaller real change in the value of fixed assets (15394 million dinars) in relation to what was “expected” (regional share was 16131 million dinars). This was the consequence of the negative total differential shift (-1518 million dinars) exceeding the positive structural shift (771 million dinars). Agriculture contributed the most to the positive structural shift (627 million dinars), and it was also the most responsible for the negative differential shift (-558 million dinars).

In this sub-period Vojvodina did not specialize in any comparatively good sector. Forestry, manufacturing, construction and transport and communication were Type 3 allocation effect sectors. Catering and tourism was Type 2, a comparatively bad non-specialized sector. As many as four sectors were Type 1– agriculture, artisanship, trade and “other activities.” .

Table 1.26 FIXED ASSETS OF THE ECONOMY OF VOJVODINA:
SHISHA RESULTS

Sector	Real change	Proportional share	Structural shift	Differential shift			
				Total	Net differential shift	Allocation effect	
						Amount	Type
1952–1960							
TOT	5583	7154	837	-2407	-682	-1725	-
AGR+	1950	698	910	342	91	251	4
FOR	14	1	-0	13	1604	-1591	3
IND	2012	3217	1101	-2306	-2387	81	2
CON	219	90	20	109	202	-93	3
TRD	149	97	49	3	1	2	4
COM	563	2550	-1344	-643	-731	89	2

CME	469	440	85	-56	-29	-28	1
HTU	132	25	5	101	508	-406	3
OTHER	75	36	11	28	58	-30	3
1960–1965							
TOT	13679	7795	2437	3447	4572	-1125	-
AGR+	4567	1536	2659	372	78	293	4
FOR	30	8	-1	23	300	-277	3
IND	6307	3230	113	2965	3850	-885	3
CON	680	180	136	364	403	-39	3
TRD	37	146	120	-229	-93	-136	1
COM	962	1991	-980	-49	-59	10	2
CME	749	549	302	-102	-50	-53	1
HTU	148	89	78	-20	-33	13	2
OTHER	199	65	10	124	175	-51	3
1965–1970							
TOT	14264	12737	1665	-138	556	-694	-
AGR+	4583	3368	1424	-209	-53	-156	1
FOR	30	21	-5	14	116	-102	3
IND	6312	5570	-153	895	1114	-220	3
CON	756	461	177	118	106	12	4
TRD	32	138	-21	-86	-77	-8	1
COM	1084	2093	-1016	7	10	-4	3
CME	861	799	997	-935	-608	-327	1
HTU	356	142	312	-98	-222	124	2
OTHER	250	145	-51	156	170	-14	3
1970–1975							
TOT	15450	19736	-722	-3564	-3983	419	-
AGR+	4179	5599	-1105	-315	-84	-230	1
FOR	54	35	-7	26	174	-148	3
IND	7599	8666	349	-1416	-1741	326	2
CON	629	827	225	-423	-366	-56	1
TRD	140	157	72	-89	-105	16	2
COM	978	2652	-539	-1135	-1820	685	2
CME	1105	1222	138	-254	-233	-21	1
HTU	531	312	134	85	228	-144	3
OTHER	235	266	11	-42	-35	-7	1

1975-1979							
TOT	20343	20350	-832	825	2758	-1933	-
AGR+	2949	5701	-1519	-1233	-314	-920	1
FOR	46	46	-15	16	79	-64	3
IND	11664	9224	919	1521	1836	-315	3
CON	639	846	52	-259	-246	-13	1
TRD	468	168	122	178	232	-54	3
COM	3014	2346	-428	1096	1915	-819	3
CME	1129	1312	36	-220	-200	-19	1
HTU	121	424	-91	-211	-494	282	2
OTHER	313	284	92	-62	-50	-12	1
1979-1983							
TOT	15949	16089	-850	710	1392	-682	-
AGR+	2439	3939	-1140	-360	-98	-262	1
FOR	139	36	-0	103	477	-373	3
IND	9321	7798	275	1248	1445	-197	3
CON	484	626	-137	-6	-6	0	2
TRD	332	195	71	66	70	-4	3
COM	1791	1993	147	-348	-540	191	2
CME	849	1000	-55	-97	-92	-4	1
HTU	240	272	-58	26	70	-44	3
OTHER	356	230	48	77	66	12	4
1983-1990							
TOT	15394	16131	771	-1508	345	-1162	-
AGR+	2696	2627	627	-558	-171	-387	1
FOR	86	54	9	23	70	-47	2
IND	8217	8091	-831	957	1077	-119	3
CON	886	604	137	144	149	-4	3
TRD	156	219	14	-77	-77	-0	1
COM	2485	1966	450	69	110	-41	3
CME	283	978	-274	-421	-407	-14	1
HTU	82	268	-38	-148	-392	245	2
OTHER	379	253	244	-118	-95	-23	1

Chapter F

COMPONENTS OF CHANGE IN THE TOTAL VALUE OF FIXED ASSETS BY REGION

A faster or slower growth rate of fixed assets in the republics and provinces in relation to the Yugoslav average led to respective changes in the share of its regions in the value of the country's fixed assets (*Table 1.27*). This share in Montenegro, Macedonia and Kosovo and Metohia rose steadily, while in Croatia, Slovenia and central Serbia it declined. The share of Bosnia and Herzegovina in the value of Yugoslav fixed assets initially grew (up to 1960), then dropped (up to 1975), only to begin growing again. Vojvodina's share in the value of fixed assets in the country as a whole grew until 1970, and then began to drop. Serbia's share in landmark years oscillated.

Table 1.27 REPUBLICS AND PROVINCES: SHARE IN FIXED ASSETS

Region	1952	1960	1965	1970	1975	1979	1983
YUG	100.0	100.0	100.0	100.0	100.0	100.0	100.0
BIH	13.2	16.1	14.8	14.2	14.0	14.6	15.2
MNO	0.8	1.8	3.0	2.8	2.9	3.0	3.1
CRO	27.3	28.2	26.8	26.4	26.0	25.8	25.6
MAK	4.0	4.8	5.2	5.5	5.9	6.0	5.8
SLO	20.3	17.9	16.5	16.4	16.6	16.5	17.1
SRB	34.2	31.1	33.7	34.7	34.6	34.2	33.3
CES	23.8	21.6	21.5	21.8	22.3	21.8	20.9
KIM	1.7	1.7	2.2	2.5	2.6	2.7	2.7
VOJ	8.8	7.9	10.0	10.4	9.7	9.7	9.6

To the changes in the regional shares of the value of Yugoslav capital (fixed assets), in addition to the initial levels of the value of capital in the region, the total (absolute and relative) changes in the value of fixed assets in Yugoslavia in the given sub-period, also contributed the share of each region in the absolute change of Yugoslav fixed assets (*Table 1.28*).

The share of almost all regions oscillated depending on the period so that, at first glance, no direct correspondence between regional share and an absolute

change in a given sub-period and its share in the value of Yugoslav fixed assets in the initial (and final) years of the surveyed sub-periods can be observed. Save for the already named factors impacting on regional share in the total capital, the reason for that lied in the different intensity and direction of change within a given sub-period.

Table 1.28 REPUBLICS AND PROVINCES:
SHARE IN THE ABSOLUTE CHANGE OF FIXED ASSETS

Region	52-60	60-65	65-70	70-75	75-79	79-83	83-90
YUG	100.0	100.0	100.0	100.0	100.0	100.0	100.0
BIH	19.4	12.6	12.9	13.6	16.1	18.0	16.1
MNO	3.1	5.1	2.4	3.1	3.2	3.7	4.2
CRO	29.3	24.3	25.6	25.1	25.0	24.6	28.2
MAK	5.7	5.9	6.2	6.8	6.2	5.0	5.7
SLO	15.1	13.8	16.1	17.0	16.5	19.7	15.0
SRB	27.4	38.4	36.9	34.3	33.0	28.9	30.8
CES	19.0	21.3	22.6	23.2	20.5	16.8	17.3
KIM	1.6	3.3	3.0	3.0	2.9	2.6	4.1
VOJ	6.8	13.8	11.2	8.1	9.6	9.6	9.4

From the point of view of the shift-share analysis the question of variation in regional fixed asset growth rates is actually a question of elements impacting positively or negatively on the regional growth of fixed assets. In other words, it is a question of whether faster (slower) growth was the result of (un)favorable structure and/or regional “particularities.” *Table 1.29* shows data on how the structural and differential shift influenced the growth of fixed assets. For all regions (in the seven observed sub-periods) the values are given in absolute (Δ) and relative (r) terms.

Thus, for example, from 1952 to 1960 the value of fixed assets in Bosnia and Herzegovina grew by 15851 million dinars (or 122.8% relative to the initial year). Had the value of fixed assets in this republic grown in accordance with the average Yugoslav tempo, its increase would have been 10820 million dinars, i.e. the growth rate would have been 83.8%.

The fact that real change exceeded proportional share was due to the negative structural and positive differential shift: the unfavorable sectoral structure in Bosnia and Herzegovina in the 1952-1960 sub-period resulted in a negative structural shift of 712 million dinars (or -5.5%), while comparative regional advantages generated a positive differential shift of 5742 million dinars (or 44.5%). The sum of the positive and negative shifts was 5031 million dinars (or 39.0%), and this is the amount

by which the real change of fixed assets was actually larger than proportional share ($15851 + 5031 = 20882$; or, in relative terms $83.8\% + 39.0\% = 122.8\%$).

In the case of *Bosnia and Herzegovina* in all sub-periods except two (1975-1979 and 1979-1983) the structural shift was negative, although it showed a continuous downward tendency (from -5.5% in the 1952-1960 sub-period to 0.1% in the final sub-period). As opposed to that, the differential shift was negative in four sub-periods (from 1960 to 1975 and in the final sub-period), while in the others it was positive, which resulted in a negative total shift in the prevalent number of sub-periods – four out of seven.

The region's positive (negative) total shift in a certain sub-period is the result of the number and absolute value of the positive (negative) total shifts in its sectors. *Table 1.30* gives the number of sectors with a positive total shift. Due to the ponder (absolute value) of positive or negative sectoral total shifts there is no firm connection between the number of sectors with a positive shift and positive regional shifts. Still, the data in this table has an indicative value.

In almost all sub-periods *Montenegro* registered a positive structural shift; the only exception was in the 1975-1979 sub-period, in which it was negative. In the entire surveyed period (with the exception of 1965-1970) the differential shift was positive and exceeded the structural shift, so that the total shift was almost fully positive (the only exception again is the 1965-1970 sub-period).

With the exception of the initial and final sub-periods, *Croatia* had a negative total shift, which was the result of both the structural and differential shifts being negative. In the initial sub-period, both shifts were positive and both were also positive in the final sub-period.

In *Macedonia*, the positive or negative value of the differential shift in all sub-periods invariably impacted the value of the total shift; from 1952 to 1960 the differential shift was positive, while from 1979 to 1990 it was negative.

In *Slovenia*, in the first sub-period and from 1975 to 1979, the negative differential shift exceeded the positive structural shift, meaning that, consequently, the total shift was negative. In the second and third sub-periods both shifts were negative, making the total shift negative, while in the 1970-1975 and 1979-1983 sub-periods both shifts were positive, resulting in a positive total shift. In the final sub-period the positive differential shift exceeded the negative structural shift, making the total shift positive.

Much like in the case of employment, the positive or negative value of the differential shift in all sub-periods in *Serbia* equalled the positive or negative value of the total shift. It was positive in two sub-periods (from 1960 to 1970), (which was also the case with the structural shift), while in the other sub-periods the differential shift was negative (which was the case with the structural shift as well, save for the final sub-period).

A similar situation – with the exception of the 1960-1965 sub-period, when the negative structural shift crucially influenced the total shift – also happened in *central Serbia*.

Much like in Serbia as a whole and its central part, in *Kosovo and Metohia* the positive or negative value of the differential shift (which was negative from 1952 to 1960 and positive from 1979 to 1983, as well as in all of the other sub-periods) influenced the value of the total shift in all sub-periods.

In the case of *Vojvodina*, too, the magnitude of and the positive or negative value of the differential shift prevailed in what would be the value of the total shift in all sub-periods – positive from 1960 to 1970, and negative in the remaining sub-periods.

Table 1.29 COMPONENTS OF GROWTH IN FIXED ASSETS BY REGION

Period	Real change		Proportional share		Structural Shift		Differential shift		Total shift	
	Δ	r	Δ	r	Δ	r	Δ	r	Δ	r
Bosnia and Herzegovina										
52-60	15851	122.8	10820	83.8	-712	-5.5	5742	44.5	5031	39.0
60-65	12496	43.4	15879	55.2	-1122	-3.9	-2261	-7.9	-3383	-11.8
65-70	16384	39.7	18905	45.8	-940	-2.3	-1581	-3.8	-2521	-6.1
70-75	25908	44.9	27047	46.9	-83	-0.1	-1055	-1.8	-1139	-2.0
75-79	33946	40.6	29563	35.4	524	0.6	3859	4.6	4383	5.2
79-83	30029	25.6	24281	20.7	403	0.3	5344	4.5	5748	4.9
83-90	19644	13.3	18475	12.5	-163	-0.1	1332	0.9	1169	0.8
Montenegro										
52-60	2518	318.7	662	83.8	180	22.7	1676	212.2	1856	234.9
60-65	5042	152.4	1826	55.2	213	6.4	3003	90.8	3216	97.2
65-70	3080	36.9	3826	45.8	275	3.3	-1022	-12.2	-746	-8.9
70-75	5820	50.9	5363	46.9	125	1.1	332	2.9	457	4.0
75-79	6683	38.7	6104	35.4	-69	-0.4	648	3.8	579	3.4
79-83	6215	26.0	4946	20.7	87	0.4	1182	4.9	1269	5.3
83-90	5158	17.1	3776	12.5	-13	-0.0	1396	4.6	1383	4.6
Croatia										
52-60	23924	89.8	22318	83.8	985	3.7	622	2.3	1606	6.0
60-65	23994	47.5	27910	55.2	-738	-1.5	-3178	-6.3	-3916	-7.7
65-70	32598	43.7	34158	45.8	-42	-0.1	-1518	-2.0	-1560	-2.1
70-75	47805	44.6	50275	46.9	426	0.4	-2896	-2.7	-2470	-2.3
75-79	52770	34.1	54826	35.4	-1125	-0.7	-932	-0.6	-2056	-1.3
79-83	41040	19.8	42927	20.7	-335	-0.2	-1552	-0.7	-1887	-0.9
83-90	34321	13.8	31153	12.5	-161	-0.1	3329	1.3	3168	1.3

Macedonia										
52-60	4660	118.2	3305	83.8	-309	-7.8	1664	42.2	1355	34.4
60-65	5837	67.8	4749	55.2	335	3.9	752	8.7	1088	12.6
65-70	7839	54.3	6617	45.8	75	0.5	1148	7.9	1222	8.5
70-75	13023	58.5	10454	46.9	-148	-0.7	2717	12.2	2569	11.5
75-79	13044	36.9	12491	35.4	-82	-0.2	635	1.8	553	1.6
79-83	8385	17.3	9991	20.7	-212	-0.4	-1394	-2.9	-1606	-3.3
83-90	6914	12.2	7105	12.5	55	0.1	-246	-0.4	-191	-0.3
Slovenia										
52-60	12323	62.1	16624	83.8	23	0.1	-4324	-21.8	-4301	-21.7
60-65	13612	42.3	17754	55.2	-431	-1.3	-3711	-11.5	-4142	-12.9
65-70	20562	44.9	20973	45.8	-385	-0.8	-25	-0.1	-411	-0.9
70-75	32430	48.9	31125	46.9	194	0.3	1111	1.7	1305	2.0
75-79	34717	35.2	34945	35.4	506	0.5	-735	-0.7	-228	-0.2
79-83	32873	24.6	27585	20.7	316	0.2	4973	3.7	5289	4.0
83-90	18277	11.0	20833	12.5	-288	-0.2	-2268	-1.4	-2556	-1.5
Serbia										
52-60	22419	67.2	27966	83.8	-166	-0.5	-5381	-16.1	-5547	-16.6
60-65	37937	68.0	30800	55.2	1743	3.1	5394	9.7	7137	12.8
65-70	46961	50.1	42946	45.8	1017	1.1	2998	3.2	4015	4.3
70-75	65290	46.4	66013	46.9	-514	-0.4	-209	-0.1	-723	-0.5
75-79	69650	33.8	72881	35.4	245	0.1	-3476	-1.7	-3231	-1.6
79-83	48148	17.5	56960	20.7	-259	-0.1	-8553	-3.1	-8812	-3.2
83-90	37575	11.6	40548	12.5	571	0.2	-3543	-1.1	-2973	-0.9
Central Serbia										
52-60	15496	66.9	19419	83.8	-1032	-4.5	-2891	-12.5	-3923	-16.9
60-65	21037	54.4	21347	55.2	-696	-1.8	386	1.0	-310	-0.8
65-70	28826	48.3	27357	45.8	-608	-1.0	2077	3.5	1469	2.5
70-75	44166	49.9	41540	46.9	209	0.2	2417	2.7	2626	3.0
75-79	43171	32.5	46952	35.4	920	0.7	-4701	-3.5	-3781	-2.8
79-83	27940	15.9	36344	20.7	577	0.3	-8981	-5.1	-8404	-4.8
83-90	21093	10.3	25524	12.5	80	0.0	-4511	-2.2	-4431	-2.2
Kosovo and Metohia										
52-60	1340	80.6	1394	83.8	30	1.8	-83	-5.0	-54	-3.2
60-65	3221	107.3	1658	55.2	2	0.1	1561	52.0	1563	52.1

65-70	3871	62.2	2852	45.8	-40	-0.6	1059	17.0	1019	16.4
70-75	5674	56.2	4737	46.9	-1	-0.0	938	9.3	937	9.3
75-79	6136	38.9	5580	35.4	156	1.0	400	2.5	556	3.5
79-83	4258	19.4	4527	20.7	14	0.1	-282	-1.3	-268	-1.2
83-90	5044	19.3	3277	12.5	-17	-0.1	1784	6.8	1767	6.8
Vojvodina										
52-60	5583	65.4	7154	83.8	837	9.8	-2407	-28.2	-1571	-18.4
60-65	13679	96.9	7795	55.2	2437	17.3	3447	24.4	5884	41.7
65-70	14264	51.3	12737	45.8	1665	6.0	-138	-0.5	1527	5.5
70-75	15450	36.7	19736	46.9	-722	-1.7	-3564	-8.5	-4286	-10.2
75-79	20343	35.4	20350	35.4	-832	-1.4	825	1.4	-7	-0.0
79-83	15949	20.5	16089	20.7	-850	-1.1	710	0.9	-140	-0.2
83-90	11439	12.2	11747	12.5	508	0.5	-817	-0.9	-309	-0.3

Table 1.30 FIXED ASSETS: NUMBER OF SECTORS
WITH POSITIVE TOTAL SHIFTS

Period	BIH	MON	CRO	MAC	SLO	SRB	CES	KIM	VOJ
1952-1960	4	8	6	4	3	7	7	7	7
1960-1965	6	9	6	8	7	7	7	8	7
1965-1970	4	5	5	6	5	7	7	8	7
1970-1975	4	6	6	5	5	5	5	6	2
1975-1979	6	3	4	7	4	4	3	6	4
1979-1983	6	8	2	0	4	2	2	5	4
1983-1990	6	8	5	4	5	6	4	7	5

The fact that real change in fixed assets was bigger than its hypothetical change in the region was the result of the positive total shift. As opposed to that, the negative total shift had, as a consequence, a smaller growth of fixed assets than proportional share. *Table 1.31* gives an informative insight into the ratio between real and hypothetical change in fixed assets by region and sub-period.

Table 1.31 FIXED ASSETS: RATIO BETWEEN REAL CHANGE (F)
AND PROPORTIONAL SHARE (P)

РЕГИОН	1952- 1960	1960- 1965	1965- 1970	1970- 1975	1975- 1979	1979- 1983	1983- 1990
BIH	F>P	F<P	F<P	F<P	F>P	F>P	F>P
MNO	F>P	F>P	F<P	F>P	F>P	F>P	F>P
CRO	F>P	F<P	F<P	F<P	F<P	F<P	F>P
MAK	F>P	F>P	F>P	F>P	F>P	F<P	F<P
SLO	F<P	F<P	F<P	F>P	F<P	F>P	F<P
SRB	F<P	F>P	F>P	F<P	F<P	F<P	F<P
CES	F<P	F<P	F>P	F>P	F<P	F<P	F<P
KIM	F<P	F>P	F>P	F>P	F>P	F<P	F>P
VOJ	F<P	F>P	F>P	F<P	F<P	F<P	F<P

Chapter G

FIXED ASSETS: BOUDEVILLE'S MODIFIED TYPOLOGY OF REGIONS

The ratio between the real and hypothetical value of fixed assets in a region can also serve as an indicator of the region's successfulness. The answer to the question of if and when (in what sub-period) a region was successful is given based on Boudeville's criteria.¹⁷

Table 1.32 FIXED ASSETS: BOUDEVILLE'S MODIFIED
TYPOLOGY OF REGIONS

PERIOD	BIH	MON	CRO	MAC	SLO	SRB	CES	KIM	VOJ
1952-1960	4	2	1	4	5	7	7	5	5
1960-1965	7	2	7	2	7	2	6	2	2
1965-1970	7	5	7	2	8	2	4	4	3
1970-1975	7	2	5	4	2	8	2	4	7
1975-1979	2	4	8	4	5	5	5	2	6
1979-1983	2	2	8	7	2	7	5	5	6
1983-1990	4	4	4	5	7	5	5	4	5

Table 1.32 shows that in three sub-periods *Bosnia and Herzegovina* showed successful growth (Type 2 from 1975 to 1979, and Type 4 in the initial sub-period), whereas in the others, its growth, from the standpoint of Boudeville's modified criteria, was unsuccessful (Type 5 and 7).

In almost all of the sub-periods, with the exception of 1965-1970 (Type 5), *Montenegro* saw successful growth: in five (1952-1960, 1960-1965, 1970-1975, 1979-1983 and 1983-1990) the growth of its fixed assets was Type 2, while in the remaining two periods it was Type 4.

In *Croatia*, the initial (Type 1) and the final sub-period (Type 2) were successful, while the others were not: Type 5 marked the 1970-1975 sub-period, Type 7 two sub-periods spanning a decade from 1960 to 1970, and Type 8 the 1975-1979 and 1979-1983 sub-periods.

¹⁷ Depending on the sign (plus or minus), magnitude, combined effect of and relation between the structural and differential shift, the regions are classified into eight types, as shown in Table 1.2. Regions that are Type 1, 2, 3 and 4 are considered successful (above-average growth), while Type 5, 6, 7 and 8 regions are considered unsuccessful (slower than average growth).

Macedonia had only two unsuccessful sub-periods – the penultimate and final one (Type 7 and 5, respectively), whereas the others were Type 2 (1960-1965 and 1965-1970) or Type 4.

In two sub-periods (1970-1975 and 1979-1983) the growth of fixed assets in *Slovenia* was successful (Type 2, or Type 4 in the 1983-1990 sub-period), while in the others it was unsuccessful (1952-1960, 1975-1979 – Type 5; 1960-1965 – Type 7; and 1965-1970 – Type 8).

Serbia was successful in two sub-periods (from 1960 to 1970 – Type 2) and unsuccessful in five (1975-1979 and 1983-1990 – Type 5 and 6, respectively; 1952-1960 and 1979-1983 – Type 7, and, finally, 1970-1975 – Type 8).

Central Serbia was characterized by as many as five different types: two successful ones (1970-1975 – Type 2 and 1965-1970 – Type 4), and three unsuccessful periods (two final sub-periods – Type 5; 1960-1965 and 1983-1990 – Type 6; and 1952-1960 – Type 7).

In the initial and penultimate sub-periods in *Kosovo and Metohia* the growth of fixed assets was Type 5, while the others were successful: the 1960-1965 and 1975-1979 sub-periods were Type 2 and the 1965-1975 decade and 1983-1990 sub-period were Type 4.

In the initial and final sub-period in *Vojvodina* the growth of fixed assets was unsuccessful (Types 5 and 6, respectively). The same goes for three other sub-periods, from 1975 to 1983, which were Type 6, and the 1970-1975 sub-period, which was Type 7. The 1960-1970 decade initially saw Type 2 fixed asset growth, followed by Type 3, meaning that it was successful.

* * *

Much like in the case of employment, the results of the shift-share analysis of fixed assets have to be interpreted starting from economic premises, but taking into account the social and political context. From the viewpoint of economic theory a change in the value of fixed assets is equivalent to gross investment in a given sub-period. From this angle, it is clear that intense investment activity may make an economy successful, on the condition that the investment is effective. In Yugoslav conditions, however, the problem lay precisely in the *efficiency of fixed assets*. In the first place, the Yugoslav economy had all the characteristics of a relatively underdeveloped economy (for example, a relative abundance of labor and a relative scarcity of capital), and, secondly, it was socialist: intentionally, *labor* was the axis that everything revolved around, much like *capital* is in capitalism. In the case of Yugoslavia, the price of capital was lower than what its relative availability suggested, which, in conditions of *soft budget constraints* inevitably leads to inefficient investment. Therefore, more investment did not mean a more successful economy. For that reason, the results of the classification of regions into eight types based on the criteria of successfulness as defined by Boudeville's modified typology in the case of Yugoslavia have to be interpreted conditionally.

When the results in this specific Yugoslav context are analyzed, it is clear why the relatively least developed regions according to Boudeville's typology appear to be the most successful: the growth of fixed assets in them was the fastest. Thus, for example, in the case of employment, Montenegro, Kosovo and Metohia and Macedonia were the most successful regions, while Croatia and Slovenia were the most unsuccessful. It needs to be noted here, too, that despite this economic paradoxicality, the results of the shift-share analysis correctly describe real change. They only show the consequences of a regional policy reduced to the mere transfer of money to underdeveloped regions: this can only result and resulted in increasing the book value of fixed assets. The conditions in which being underdeveloped automatically ensures (through the Fund for Underdeveloped Regions) a continuous and abundant inflow of cheap capital, however, results in a negative correlation of the size of the inflow and the efficiency of using this capital. Inefficient investment, on its part, does not lend support to economic development. To the contrary.

Chapter H

THE COMPONENTS OF SHIFTS IN THE TOTAL GROSS DOMESTIC PRODUCT BY REGION

The shift-share analysis was also applied to examine the gross domestic product in the economy's social sector. The problem of a lack of data for the housing manufacturing sector prior to 1960 was resolved as in the case of employment¹⁸. The values of GDP are given in 1972 prices and in millions of dinars, before the dinar was denominated on January 1, 1990.

BOSNIA AND HERZEGOVINA

Table 1.33 gives the results of the shift-share analysis of Bosnia and Herzegovina's GDP. In the first three sub-periods (1952-1960, 1960-1965 and 1965-1970) real change of GDP was smaller than the hypothetical change that would have been achieved had Bosnia and Herzegovina's GDP grown at the average Yugoslav rate ($F < P$). In the other three sub-periods the situation was the reverse ($F > P$).

In the first sub-period (1952-1960) both shifts were negative: the structural shift was -1249 million dinars and the differential, -936 million dinars. As a result, real change was by one-third smaller than proportional share (7043 million dinars). Construction was the most responsible for the two shifts being negative (-1438 and -1398 million dinars, respectively).

In this sub-period forestry was the only comparatively good sector which Bosnia and Herzegovina was specialized in (Type 4 allocation effect). Manufacturing, catering and tourism, and "other activities" were of the Type 3 allocation effect. Sectors characterized by the Type 2 allocation effect predominated - agriculture, artisanship, transport and communication and trade. The worst combination - specialization in a comparatively inferior sector - characterized water management and construction.

In the 1960-1965 sub-period, too, real change (5593 million dinars) was also smaller than proportional share (6156 million dinars), which was the consequence of both shifts being negative (-157 and -406 million dinars, respectively). Forestry is the most responsible for the negative structural shift (-313 million dinars), and construction for the negative differential shift (-300 million dinars).

18 See relations (1.10) to (1.15) in Chapter B in the first part of this treatise.

Much like in the previous sub-period only one sector (manufacturing) was marked by the best type of allocation effect. The numbers of Type 3 sectors went down, while Type 2 sectors increased by one. Sectors of the first type were artisanship and “other activities,” and those of the second – agriculture, water management, transport and communication, trade and catering and tourism. Forestry and construction were Type 1 allocation effect sectors.

In the 1965–1970 sub-period, like in the preceding two, both shifts were negative (structural was -121, and differential -1537 million dinars). The consequence was a smaller real change of GDP (4153 million dinars) than the hypothetical (5811 million dinars). This time manufacturing was the most responsible for both shifts being negative (-340 and -856 million dinars).

Much like in the first sub-period forestry was the only Type 4 allocation effect sector. There were no Type 3 sectors, and there were as many as seven comparatively bad sectors which Bosnia and Herzegovina did not specialize in (Type 2): agriculture, water management, transport and communication, trade, catering and tourism, housing and “other activities.” The worst, Type 1 allocation effect characterized manufacturing, construction and artisanship. Real change (8022 million dinars) for the first time exceeded hypothetical change (7793 million dinars) in the 1970–1975 sub-period. This was due to a positive differential shift (234 million dinars) exceeding by far the negative structural shift (-6 million dinars). Construction was the most responsible for the negative structural shift (-471 million dinars), while trade contributed the most to the positive differential shift (116 million dinars).

In this sub-period two sectors (construction and forestry) were Type 4 allocation effect sectors, whereas as many as seven were Type 3: agriculture, water management, transport and communication, trade, catering and tourism, housing and “other activities.” There were no Type 2 sectors which predominated in the preceding sub-period. In this sub-period Bosnia and Herzegovina specialized in forestry and manufacturing, although it did not fare well in these sectors (Type 1).

In the 1975–1979 sub-period real change of GDP was again higher (9423 million dinars) than proportional share (9288 million dinars) owing to a positive differential shift (164 million dinars) surpassing the negative structural shift (-29 million dinars). Trade negatively impacted the most on the structural shift (-238 million dinars) while manufacturing was the biggest contributor to the positive differential shift (592 million dinars).

Manufacturing was the only comparatively good sector in which Bosnia and Herzegovina specialized in this sub-period, while not specializing in four such sectors – agriculture, water management, catering and tourism, and “other activities.” Transport and communication, trade and housing were Type 2 allocation effect sectors, while forestry, construction and artisanship were comparatively bad sectors which Bosnia and Herzegovina specialized in.

The 1979–1983 sub-period was the last in which real change of GDP (1526 million dinars) in Bosnia and Herzegovina exceeded hypothetical change (1006

million dinars). This was also the only sub-period in which both shifts were positive: the structural shift amounted to 102 and the differential to 1418 million dinars. Manufacturing contributed the most to both the structural and differential shifts being positive: 1429 and 1267 million dinars, respectively.

Table 1.33 GDP OF BOSNIA AND HERZEGOVINA: SHISHA RESULTS

Sector	Real change	Proportional share	Structural shift	Differential shift			
				Total	Net differential shift	Allocation effect	
						Amount	Type
1952–1960							
TOT	4858	7043	-1249	-936	253	-1189	-
AGR	-79	324	-148	-255	-378	123	2
WAT	-13	50	-29	-34	-27	-7	1
FOR	17	708	-704	14	7	6	4
MAN	3163	1691	821	651	847	-196	3
CON	-493	2343	-1438	-1398	-716	-682	1
CRA	130	88	43	-1	-1	0	2
TRC	707	564	173	-30	-36	6	2
TRD	1058	935	147	-24	-32	8	2
TOU	178	282	-117	12	20	-7	3
HSN	-	-	-	-	-	-	-
OTHER	190	58	4	128	570	-442	3
1960–1965							
TOT	5593	6156	-157	-406	-525	119	-
AGR	38	120	-34	-48	-128	80	2
WAT	6	18	-5	-8	-10	3	2
FOR	46	364	-313	-6	-3	-3	1
MAN	3317	2555	649	114	107	7	4
CON	507	911	-105	-300	-235	-64	1
CRA	122	114	-17	25	26	-2	3
TRC	323	664	-270	-72	-75	3	2
TRD	993	1040	148	-195	-220	24	2
TOU	9	238	-196	-33	-43	10	2
HSN	(85)	0	0	(85)	0	(85)	-
OTHER	148	132	-15	31	55	-24	3

1965-1970							
TOT	4153	5811	-121	-1537	-1538	2	-
AGR	56	89	-16	-17	-52	35	2
WAT	9	14	-2	-3	-5	2	2
FOR	26	247	-221	1	0	0	4
MAN	1556	2752	-340	-856	-769	-87	1
CON	651	750	168	-268	-231	-36	1
CRA	43	114	-56	-15	-15	-1	1
TRC	495	531	75	-111	-118	7	2
TRD	1198	998	365	-165	-191	27	2
TOU	124	154	-16	-13	-18	5	2
HSN	17	29	-8	-4	-5	2	2
OTHER	-21	134	-70	-85	-134	49	2
1970-1975							
TOT	8022	7793	-6	234	518	-284	-
AGR	201	117	-12	96	287	-191	3
WAT	31	18	-2	15	22	-8	3
FOR	105	275	-170	-0	-0	-0	1
MAN	4242	3539	911	-208	-189	-19	1
CON	653	1049	-471	76	67	9	4
CRA	207	138	56	13	12	1	4
TRC	650	755	-107	2	2	-0	3
TRD	1526	1517	-107	116	130	-14	3
TOU	174	211	-95	58	75	-17	3
HSN	33	38	-21	17	23	-6	3
OTHER	199	137	13	50	89	-39	3
1975-1979							
TOT	9423	9288	-29	164	603	-439	-
AGR	311	165	-24	171	419	-248	3
WAT	31	25	-2	7	9	-2	3
FOR	70	271	-198	-3	-1	-2	1
MAN	5213	4408	213	592	549	42	4
CON	863	1114	434	-685	-592	-93	1
CRA	98	186	-35	-52	-47	-5	1
TRC	616	859	-213	-30	-31	1	2

TRD	1519	1797	-238	-39	-44	4	2
TOU	182	238	-59	3	4	-1	3
HSN	25	43	-6	-12	-15	2	2
OTHER	494	181	99	213	352	-139	3
1979–1983							
TOT	2526	1006	102	1418	1461	-43	-
AGR	277	22	109	147	287	-140	3
WAT	18	3	5	10	12	-2	3
FOR	64	24	50	-10	-4	-6	1
MAN	3193	497	1429	1267	1144	123	4
CON	-1251	114	-1235	-129	-130	0	2
CRA	87	18	63	6	6	0	4
TRC	88	86	25	-23	-24	1	2
TRD	-56	187	-391	148	165	-17	3
TOU	32	24	31	-24	-28	5	2
HSN	28	4	8	15	20	-4	3
OTHER	46	28	8	10	13	-3	3
1983–1990							
TOT	-2585	-2360	182	-407	-787	380	-
AGR	-57	-63	187	-181	-318	138	2
WAT	-14	-7	-3	-4	-5	1	2
FOR	-194	-57	-75	-63	-26	-36	1
MAN	1485	-1277	1524	1238	1095	144	4
CON	-818	179	-663	23	25	-2	2
CRA	-144	-44	-158	59	59	-0	3
TRC	-884	195	528	-1217	-1344	127	2
TRD	-1697	408	-939	351	398	47	3
TOU	-280	-55	-221	-4	-5	1	2
HSN	-43	-11	5	-37	-45	8	2
OTHER	61	-64	-4	128	175	-46	3

In this sub-period manufacturing and artisanship were comparatively good sectors which Bosnia and Herzegovina specialized in, while it did not specialize in the other five comparatively good sectors – agriculture, water management, trade, housing and “other activities.” Construction, transport and communication, catering and tourism, and forestry were comparatively inferior sectors in this sub-period.

Bosnia and Herzegovina did not specialize in in the first three (Type 2), although it did specialize in forestry (Type 1).

In the final sub-period (1983–1990) real change (-2585 million dinars) was again below hypothetical change (-2360 million dinars), which this time around, however, was due to a negative differential shift (-407 million dinars) exceeding the positive structural shift (182 million dinars). Manufacturing contributed the most to a positive structural shift (1525 million dinars), while transport and communication were the most responsible for the negative differential shift (-1217 million dinars).

Manufacturing remained a comparatively good sector which Bosnia and Herzegovina specialized in, whereas the republic did not specialize in the artisanship, construction and “other activities” sectors, although they, too, turned out to be comparatively good. Bosnia and Herzegovina did not specialize in five sectors (agriculture, water management, trade, transport and communication, catering and tourism, and housing) out of the six comparatively inferior sectors (Type 2), while it specialized in forestry despite the fact that it was also comparatively inferior (Type 1).

MONTENEGRO

Table 1.34 gives the results of the shift-share analysis of Montenegro's gross domestic product. After the first sub-period (1952–1960) in which real change of GDP was smaller than hypothetical change, two sub-periods in which the situation was the reverse followed: 1960–1965 and 1965–1970, to be replaced by two other sub-periods – 1970–1975 and 1975–1979 – in which real change was once again smaller than hypothetical change. In the first sub-period of the final decade (1979–1983), real change exceeded hypothetical change and in the second (1983–1990) the situation was again the reverse.

In the first sub-period (1952–1960), both shifts were negative, the consequence of which was that real change (502 million dinars) was smaller than proportional share (970 million dinars). Construction was the most responsible (-183 million dinars) for the negative structural shift (-292 million dinars), while agriculture “contributed” the most (-249 million dinars) to the negative differential shift (-176 million dinars).

The comparatively good sectors which Montenegro specialized in were forestry and catering and tourism. Manufacturing, artisanship, transport and communication and “other activities” were also comparatively good sectors, but Montenegro did not specialize in them. Trade was a Type 2 allocation effect sector, while agriculture, water management and construction were Type 1 sectors.

In the 1960–1965 sub-period real change (1259 million dinars) exceeded proportional share (758 million dinars) owing to the positive differential shift (612 million dinars) surpassing the negative structural shift (-111 million dinars). Manufac-

turing had the highest positive differential shift (342 million dinars), while catering and tourism registered the highest negative structural shift (-60 million dinars).

Two sectors in this sub-period were characterized by the best and the worst type of allocation effect. Transport and communication and catering and tourism were Type 4, while forestry and construction were Type 1 sectors. All other sectors were Type 3.

The next sub-period (1965–1970) was also marked by real change (970 million dinars) being higher than proportional share (910 million dinars). In this sub-period the structural shift equalled zero, meaning that the positive and negative structural shifts cancelled each other out. The differential shift was positive and equalled the difference between real and hypothetical change in GDP (60 million dinars). Transport and communication provided the biggest contribution to that (81 million dinars).

Out of four comparatively good sectors Montenegro specialized in two – transport and communication and catering and tourism, but not in artisanship and trade. Type 2 allocation effect sectors predominated – agriculture, water management, manufacturing and “other activities.” Forestry, construction and housing were characterized by the Type 1 allocation effect.

The negative sign before both shifts (the structural shift was -109 million dinars, and the differential shift was -428 million dinars) led to real change (801 million dinars) in the 1970–1975 sub-period being below the expected share (1339 million dinars). Construction recorded the highest negative structural shift (-103 million dinars) and manufacturing the highest negative differential shift (-351 million dinars).

Much like in the preceding sub-period, in 1970 to 1975 period Montenegro had four comparatively good sectors, of which the republic specialized in two – forestry and housing, while failing to do the same in the sectors of trade and “other activities.” The number of Type 2 sectors remained unchanged and encompassed agriculture, water management, manufacturing and artisanship. Construction, transport and communication and catering and tourism were characterized by the Type 1 allocation effect.

The negative result of both shifts (the structural was -40 million dinars and the differential -111 million dinars) in the 1975–1979 sub-period led to real change in GDP (1261 million dinars) being below proportional share (1412 million dinars). Transport and communication saw the biggest negative structural shift (-54 million dinars), while catering and tourism registered the biggest negative differential shift (-222 million dinars).

In this sub-period there forestry was the only comparatively good sectors that Montenegro specialized in – Type 1. The republic did not specialize in three comparatively good sectors – manufacturing, artisanship and “other activities.” Agriculture and water management were Type 2 allocation effect sectors. The worst type of allocation effect predominated in six sectors: forestry, construction, transport and communication, trade, catering and tourism, and housing.

In the 1979–1983 sub-period, real change (1092 million dinars) exceeded proportional share by many times (148 million dinars). This happened owing to the positive differential shift (1017 million dinars) being much higher than the negative structural shift (-73 million dinars). Construction was the most responsible for the negative structural shift (-216 million dinars), while transport and communication contributed the most to the positive differential shift (452 million dinars).

In this sub-period there were as many as eight comparatively good sectors, of which Montenegro specialized in five: construction, transport and communication, trade, housing and “other activities.” The republic did not specialize in the remaining three comparatively good sectors – agriculture, artisanship and catering and tourism. The Type 2 allocation effect characterized water management and manufacturing, while forestry was a Type 1 sector.

In the final sub-period (1983–1990) real change of GDP (-664 million dinars) was smaller than proportional share (-390 million dinars), which was the consequence of both shifts being negative.

Construction (-181 million dinars) was the most responsible for the negative structural shift (-50 million dinars), and also (-180 million dinars) for the negative differential shift (-225 million dinars).

Table 1.34 MONTENEGRO'S GDP: SHISHA RESULTS

Sector	Real change	Proportional share	Structural shift	Differential shift			
				Total	Net differential shift	Allocation effect	
						Amount	Type
1952–1960							
TOT	502	970	-292	-176	520	-696	-
AGR	-143	195	-90	-249	-84	-165	1
WAT	-6	9	-5	-10	-6	-3	1
FOR	50	68	-67	50	38	12	4
MAN	297	98	47	152	471	-319	3
CON	31	298	-183	-84	-47	-38	1
CRA	9	4	2	3	9	-7	3
TRC	140	42	13	85	193	-107	3
TRD	50	165	26	-141	-146	4	2
TOU	56	86	-35	6	4	2	4
HSN	-	-	-	-	-	-	-
OTHER	19	5	0	13	88	-75	3

1960–1965							
TOT	1259	758	-111	612	828	-216	-
AGR	22	21	-6	7	13	-6	3
WAT	1	1	-0	0	1	-0	3
FOR	-7	61	-52	-16	-5	-11	1
MAN	604	209	53	342	484	-142	3
CON	130	167	-19	-17	-9	-8	1
CRA	7	7	-1	1	3	-2	3
TRC	163	97	-39	105	93	12	4
TRD	230	110	16	104	137	-32	3
TOU	30	73	-60	17	9	8	4
HSN	(21)	0	0	(21)	0	(21)	-
OTHER	58	13	-1	47	103	-56	3
1965–1970							
TOT	970	910	0	60	-10	70	-
AGR	10	21	-4	-7	-14	7	2
WAT	0	1	-0	-1	-3	2	2
FOR	3	36	-33	-1	-0	-0	1
MAN	218	339	-42	-79	-90	11	2
CON	183	150	34	-1	-1	-0	1
CRA	5	7	-3	1	4	-2	3
TRC	214	117	16	81	61	20	4
TRD	216	148	54	14	17	-3	3
TOU	126	57	-6	76	44	32	4
HSN	5	7	-2	-0	-0	-0	1
OTHER	-10	28	-15	-23	-28	4	2
1970–1975							
TOT	801	1339	-109	-428	-387	-41	-
AGR	16	26	-3	-7	-17	9	2
WAT	1	1	-0	-0	-0	0	2
FOR	16	40	-25	1	0	0	4
MAN	209	446	115	-351	-435	84	2
CON	-40	229	-103	-167	-115	-52	1
CRA	2	9	4	-11	-26	16	2
TRC	126	204	-29	-50	-33	-17	1

TRD	380	239	-17	157	192	-34	3
TOU	14	108	-48	-45	-20	-25	1
HSN	12	10	-5	8	7	1	4
OTHER	66	27	2	37	59	-22	3
1975-1979							
TOT	1261	1412	-40	-111	191	-302	-
AGR	5	28	-4	-19	-41	23	2
WAT	0	1	-0	-1	-5	3	2
FOR	2	40	-29	-9	-4	-5	1
MAN	862	452	22	389	535	-147	3
CON	182	185	72	-75	-60	-16	1
CRA	7	8	-2	1	2	-1	3
TRC	105	217	-54	-58	-37	-22	1
TRD	165	328	-43	-120	-110	-9	1
TOU	-149	98	-24	-222	-99	-123	1
HSN	-2	12	-2	-13	-8	-4	1
OTHER	84	44	24	16	17	-1	3
1979-1983							
TOT	1092	148	-73	1017	952	65	-
AGR	97	2	12	82	214	-131	3
WAT	0	0	0	-0	-1	1	2
FOR	4	3	7	-6	-3	-4	1
MAN	148	59	171	-82	-92	9	2
CON	87	20	-216	284	240	44	4
CRA	6	1	3	2	5	-3	3
TRC	479	20	6	452	298	155	4
TRD	-8	31	-65	26	26	0	4
TOU	230	4	5	220	230	-10	3
HSN	25	1	2	22	19	3	4
OTHER	25	6	2	18	16	1	4
1983-1990							
TOT	-664	-390	-50	-225	-239	14	-
AGR	21	-11	32	-0	-0	0	2
WAT	-2	-0	-0	-2	-10	8	2
FOR	21	-11	32	-0	-0	0	4

MAN	53	-139	166	26	35	-9	3
CON	-410	-49	-181	-180	-118	-62	1
CRA	-26	-2	-8	-16	-52	36	2
TRC	161	-73	196	37	18	19	4
TRD	-273	-68	-157	-48	-54	6	2
TOU	-89	-22	-89	22	12	11	4
HSN	4	-4	1	6	4	2	4
OTHER	-90	-14	-1	-75	-76	1	2

In this sub-period in Montenegro there were four Type 4 allocation effect sectors (forestry, transport and communication, catering and tourism, and housing), one Type 3 sector (manufacturing), five Type 2 sectors (agriculture, water management, artisanship, trade and “other activities”) and one Type 1 allocation effect sector (construction).

CROATIA

The results of the shift-share analysis of Croatia's gross domestic product are provided in *Table 1.35*. In two sub-periods (1952-1960 and 1965-1970) this republic registered a bigger real change in GDP than suggested by its proportional share, while in the remaining five sub-periods the situation was the reverse.

In the first sub-period (1952-1960), real change (12546 million dinars) exceeded proportional share (12069 million dinars) as a consequence of both the structural and differential shifts being positive. Manufacturing contributed the most (1961 million dinars) to the positive structural shift (469 million dinars) and construction (638 million dinars) to the positive differential shift (8 million dinars).

Only the catering and tourism sector was Type 4 allocation effect, while Type 3 sectors numbered five – agriculture, water management, construction, artisanship and trade. There were no Type 2 sectors, while four – forestry, manufacturing, transport and communication and “other activities” – were Type 1.

As opposed to the first sub-period, the 1960-1965 one saw both shifts having negative values, leading to real change (11961 million dinars) being smaller than proportional (12825 million dinars). The transport and communication sector (-711 million dinars) was the most responsible for the negative structural shift (-496 million dinars), and manufacturing (-508 million dinars) for the negative differential shift (-368 million dinars).

Catering and tourism and “other activities” were Type 4 allocation effect sectors, while there were no Type 3 sectors. There were five Type 2 sectors: agriculture,

water management, manufacturing, construction and trade. The worst type of allocation effect appeared in forestry, artisanship and transport and communication.

In 1965–1970 sub-period both the positive structural (8 million dinars) and the positive differential shift (422 million dinars) resulted in real change in GDP (12642 million dinars) being bigger than proportional share (12212 million dinars). Trade registered the biggest positive structural shift (892 million dinars) while the differential shift in agriculture (567 million dinars) was also the largest.

Five sectors in Croatia in this sub-period were comparatively good; two were Type 4 (forestry and catering and tourism), and three Type 3 (agriculture, water management and construction). Manufacturing and artisanship were Type 2, while the remaining four sectors – transport and communication, trade, housing and “other activities” –were Type 1 allocation effect sectors.

In the 1970–1975 sub-period both shifts were negative (the structural was -242 and differential -1368 million dinars) causing real change (16209 million dinars) to be lower than proportional share (17819 million dinars). Construction had the highest negative structural shift (-890 million dinars) and manufacturing the highest negative differential shift (-1473 million dinars).

Forestry, catering and tourism and “other activities” were Type 4 allocation effect sectors and artisanship and trade Type 3. Agriculture, water management, manufacturing and construction were Type 2, while the Type 1 allocation effect was registered in transport and communication and housing.

As in the preceding sub-period, between 1975 and 1979, the negative values of both shifts caused real change (19727 million dinars) to be lower than hypothetical change (20557 million dinars). The transport and communication sector was the most responsible for the negative structural shift (-236 million dinars) and manufacturing for the negative differential shift (-595 million dinars).

Forestry and “other activities” were Type 4 allocation effect sectors, while agriculture and construction were characterized by Type 3. Water management and manufacturing were Type 2, whereas in as many as five sectors (artisanship, transport and communication, trade, catering and tourism and housing) the Type 1 allocation effect appeared.

A special characteristic of the 1979–1983 sub-period was an absolute drop in Croatia’s GDP (by 796 million dinars). Proportional share amounted to 2197 million dinars. The difference between the negative real change and the hypothetical regional share equaled the sum of the two negative shifts. Construction (-2687 million dinars) was the most responsible for the negative structural shift (-216 million dinars) and manufacturing (-3165 million dinars) for the negative differential shift (-2778 million dinars).

The Type 4 allocation effect characterized forestry, artisanship, transport and communication and catering and tourism, construction was a Type 3 sector, water management and manufacturing were Type 2, while trade, housing and “other activities” were Type 1.

In the final sub-period from 1983 to 1990 an absolute drop in GDP was registered in Croatia (and Yugoslavia as a whole!): the real negative change (-6253 million dinars) was higher than the proportional, which was also negative (-4792 million dinars). This was the result of the negative differential shift (-1009 million dinars) exceeding the negative structural shift (-452 million dinars). Trade experienced the biggest negative structural shift (-2192 million dinars) and manufacturing the biggest negative differential shift (-744 million dinars).

Table 1.35 CROATIA'S GDP: SHISHA RESULTS

Sector	Real change	Proportional share	Structural shift	Differential shift			
				Total	Net differential shift	Allocation effect	
						Amount	Type
1952-1960							
TOT	12546	12069	469	8	748	-740	-
AGR	468	388	-178	258	547	-289	3
WAT	34	29	-17	22	52	-30	3
FOR	-138	921	-917	-142	-100	-43	1
MAN	5252	4039	1961	-748	-698	-50	1
CON	1208	1478	-907	638	888	-250	3
CRA	314	171	83	60	67	-7	3
TRC	1808	1541	473	-206	-157	-49	1
TRD	2566	2038	321	208	216	-8	3
TOU	569	930	-384	23	19	4	4
HSN	-	-	-	-	-	-	-
OTHER	464	535	34	-104	-86	-18	1
1960-1965							
TOT	11961	12825	-496	-368	-835	467	-
AGR	183	448	-126	-139	-207	68	2
WAT	13	33	-9	-11	-18	6	2
FOR	36	388	-333	-19	-16	-3	1
MAN	5586	4860	1234	-508	-524	16	2
CON	1184	1393	-160	-49	-53	3	2
CRA	160	255	-38	-57	-56	-1	1
TRC	1028	1749	-711	-10	-8	-2	1
TRD	2681	2407	344	-69	-70	1	2

TOU	202	774	-638	67	56	11	4
HSN	(363)	0	0	(363)	0	(363)	-
OTHER	525	519	-59	65	61	4	4
1965-1970							
TOT	12642	12212	8	422	818	-396	-
AGR	851	346	-62	567	939	-372	3
WAT	63	25	-3	41	71	-31	3
FOR	27	258	-232	1	0	0	4
MAN	4333	4988	-615	-39	-41	2	2
CON	1611	1287	288	36	38	-2	3
CRA	91	216	-106	-20	-21	1	2
TRC	1588	1459	205	-77	-62	-14	1
TRD	3203	2441	892	-130	-130	-0	1
TOU	703	559	-59	203	160	43	4
HSN	82	124	-35	-7	-5	-2	1
OTHER	91	508	-264	-153	-133	-20	1
1970-1975							
TOT	16209	17819	-242	-1368	-1465	98	-
AGR	416	686	-70	-201	-234	33	2
WAT	30	50	-5	-16	-20	4	2
FOR	110	288	-178	0	0	0	4
MAN	7294	6972	1795	-1473	-1551	78	2
CON	950	1981	-890	-141	-150	9	2
CRA	507	267	108	132	144	-12	3
TRC	1842	2157	-305	-10	-8	-2	1
TRD	3760	3810	-269	219	223	-4	3
TOU	480	862	-387	5	4	1	4
HSN	17	164	-94	-53	-38	-16	1
OTHER	805	581	54	170	164	6	4
1975-1979							
TOT	19727	20557	-236	-595	-528	-67	-
AGR	1033	725	-107	415	512	-97	3
WAT	20	53	-3	-30	-40	10	2
FOR	92	284	-208	15	13	2	4
MAN	7871	8346	403	-878	-953	75	2
CON	3162	2014	785	362	383	-21	3
CRA	260	392	-74	-58	-55	-3	1

TRC	1840	2450	-609	-2	-2	-0	1
TRD	3541	4489	-595	-353	-346	-7	1
TOU	575	897	-224	-99	-70	-29	1
HSN	127	147	-19	-1	-1	-0	1
OTHER	1207	758	415	34	29	4	4
1979–1983							
TOT	-796	2197	-216	-2778	-3284	507	-
AGR	382	86	434	-139	-148	10	2
WAT	-16	5	8	-29	-44	15	2
FOR	120	26	53	41	34	7	4
MAN	280	888	2556	-3165	-3489	324	2
CON	-2190	247	-2687	250	251	-2	3
CRA	313	39	138	136	133	3	4
TRC	1034	249	71	714	573	141	4
TRD	-1043	460	-963	-540	-534	-6	1
TOU	389	88	114	187	134	52	4
HSN	-4	15	31	-51	-39	-12	1
OTHER	-62	94	28	-183	-157	-26	1
1983–1990							
TOT	-6253	-4792	-452	-1009	-1210	201	-
AGR	609	212	625	196	210	-14	3
WAT	1	-10	-3	14	25	-10	3
FOR	-58	-63	-84	89	68	21	4
MAN	-363	-1972	2353	-744	-865	121	3
CON	-2452	-419	-1554	-479	-450	29	1
CRA	-841	-104	-372	-366	-319	-47	1
TRC	1758	-607	1641	724	523	201	4
TRD	-3268	-953	-2192	-123	-121	-2	4
TOU	-1051	-217	-868	34	23	12	4
HSN	-115	-34	14	-95	-76	-19	1
OTHER	-473	-202	-11	-259	-226	-34	1

In this sub-period eight sectors were divided into two polarized groups: the Type 4 allocation effect characterized forestry, transport and communication and catering and tourism and Type 1 construction, artisanship, trade, housing and “other activities.” Two sectors (agriculture and water management) were Type 3 allocation effect sectors while manufacturing was Type 2.

MACEDONIA

Table 1.36 lists the results of the shift-share analysis of Macedonia's GDP. In almost all sub-periods, except for the first (1952–1960), real change in GDP was higher than the hypothetical change that would have been achieved had Macedonia's GDP grown (or dropped) at the average rate in Yugoslavia.

The first surveyed period (1952–1960) was characterized by the negative values of both shifts – structural (-146 million dinars) and differential (-721 million dinars). As a result, real change (1521 million dinars) was about one-third smaller than proportional share (2388 million dinars). Agriculture was the most responsible for the values of both shifts being negative (-257, for structural, and -522, for differential).

In this sub-period Macedonia did not specialize in three comparatively good sectors: agriculture, water management and trade (Type 1). Forestry, artisanship, transport and communication and “other activities” were of the Type 3 allocation effect. Sectors characterized by Type 2 were manufacturing, construction and catering and tourism. The best combination – specialization in a comparatively superior sector – in this period was in Macedonia nonexistent.

In the 1960–1965 sub-period, too, real change (2884 million dinars) was above proportional share (2019 million dinars), which was the result of the positive differential shift (882 million dinars) exceeding the negative structural shift (-17 million dinars). Transport and communication were the most responsible for the negative structural shift (-84 million dinars), while construction and manufacturing contributed the most to the positive differential shift (360 and 356 million dinars, respectively).

Three sectors – agriculture, water management and trade – in this period were of the Type 4 allocation effect. The number of Type 3 allocation effect sectors increased to five, while only one was Type 2. Forestry, manufacturing, construction, artisanship and catering and tourism were in the former group, while the transport and communication sector was in the latter. Type 1 allocation effect included only “other activities”.

In the 1965–1970 sub-period both shifts were positive (the structural was 35 and differential 759 million dinars). Owing to that, real change in GDP (3059 million dinars) was above hypothetical (2264 million dinars). Trade was the most responsible for the positive value of the structural shift (178 million dinars) and manufacturing for the positive value of the differential shift (506 million dinars).

Much like in the preceding in this sub-period, agriculture, water management and trade were Type 4 sectors. Four sectors (manufacturing, artisanship, transport and communication and “other activities”) were Type 3. Two sectors (forestry and catering and tourism) were comparatively bad and Macedonia did not specialize in any of them (Type 2 allocation effect). The worst Type of allocation effect – Type 1 – characterized construction and housing.

Real change (3599 million dinars) in the 1970–1975 sub-period was above hypothetical (3567 million dinars) – the result of a positive structural (11 million dinars) and positive differential shift (21 million dinars). Manufacturing contributed the most to the positive values of both shifts (383 and 101 million dinars, respectively).

In this sub-period four sectors (agriculture, water management, manufacturing and housing) were Type 4 allocation effect sectors, while five were Type 3: forestry, artisanship, transport and communication, catering and tourism and “other activities.” There were no Type 2 sectors. In this sub-period Macedonia specialized in construction and trade albeit not being comparatively good in them (Type 1).

In the 1975–1979 sub-period real change in GDP (4940 million dinars) was again higher than proportional share (4228 million dinars), due to the positive differential shift (716 million dinars) being higher than the negative structural shift (-4 million dinars). Trade impacted the most on the negative structural shift (118 million dinars), while manufacturing contributed the most to the positive differential shift (615 million dinars).

Manufacturing and housing were comparatively good sectors in which Macedonia specialized in in this sub-period. It did not specialize in six other sectors – forestry, construction, artisanship, trade, catering and tourism and “other activities.” The transport and communication sector was marked by the Type 2 allocation effect, while agriculture and water management were comparatively inferior sectors which the republic specialized in.

The 1979–1983 sub-period was the last in which real change in Macedonia’s GDP (522 million dinars) exceeded hypothetical change (475 million dinars). This was the result of the positive structural shift (135 million dinars) being higher than the negative differential shift (-88 million dinars). Manufacturing contributed the most to the positive value of the structural shift (647 million dinars), while transport and communication were the most responsible for the negative differential shift (-292 million dinars).

Water management, manufacturing and housing in this sub-period were sectors which Macedonia specialized in, as opposed to three comparatively good sectors – forestry, construction and trade. Artisanship, transport and communication, catering and tourism, “other activities” and agriculture were comparatively inferior sectors in this sub-period. Macedonia did not specialize in the first four (Type 2), although it did specialize in the last one (Type 1).

In the final sub-period (1983–1990) real – negative – change (-1047 million dinars) was somewhat higher than hypothetical (-1076 million dinars) due to a negative differential shift (-96 million dinars) and a positive structural shift (124 million dinars). Manufacturing contributed the most to the positive structural shift (676 million dinars), while trade was the most responsible for the negative differential shift (-483 million dinars).

Table 1.36 MACEDONIA'S GDP: SHISHA RESULTS

Sector	Real change	Proportional share	Structural shift	Differential shift			
				Total	Net differential shift	Allocation effect	
						Amount	Type
1952–1960							
TOT	1521	2388	-146	-721	-105	-616	-
AGR	-217	562	-257	-522	-151	-370	1
WAT	-18	45	-26	-37	-11	-26	1
FOR	59	29	-29	59	259	-200	3
MAN	851	599	291	-39	-48	10	2
CON	54	341	-210	-78	-93	15	2
CRA	37	23	11	4	6	-3	3
TRC	224	170	52	2	3	-1	3
TRD	390	443	70	-123	-116	-7	1
TOU	19	125	-51	-54	-67	13	2
HSN	-	-	-	-	-	-	-
OTHER	122	52	3	67	114	-47	3
1960–1965							
TOT	2884	2019	-17	882	877	5	-
AGR	156	165	-46	38	24	14	4
WAT	13	13	-3	3	2	1	4
FOR	15	46	-40	8	9	-1	3
MAN	1309	760	193	356	370	-14	3
CON	538	200	-23	360	422	-62	3
CRA	37	31	-5	11	13	-3	3
TRC	102	206	-84	-20	-22	2	2
TRD	623	433	62	128	114	15	4
TOU	13	73	-60	0	0	-0	3
HSN	(64)	0	0	(64)	0	(64)	-
OTHER	14	92	-10	-67	-56	-11	1
1965–1970							
TOT	3059	2264	35	759	765	-6	-
AGR	285	158	-28	155	105	51	4
WAT	23	13	-1	12	8	4	4

FOR	3	35	-31	-1	-1	0	2
MAN	1320	928	-115	506	525	-19	3
CON	314	311	69	-66	-54	-12	1
CRA	23	33	-16	6	8	-2	3
TRC	282	165	23	94	124	-31	3
TRD	710	487	178	45	42	3	4
TOU	33	51	-5	-12	-20	8	2
HSN	13	22	-6	-3	-2	-1	1
OTHER	53	63	-33	23	30	-7	3
1970-1975							
TOT	3599	3567	11	21	53	-32	-
AGR	307	275	-28	60	35	25	4
WAT	24	22	-2	4	2	2	4
FOR	15	38	-24	0	1	-0	3
MAN	1971	1487	383	101	100	1	4
CON	46	450	-202	-202	-189	-13	1
CRA	74	44	18	12	17	-4	3
TRC	290	282	-40	48	61	-13	3
TRD	670	787	-56	-61	-60	-1	1
TOU	63	67	-30	27	50	-24	3
HSN	20	28	-16	8	6	1	4
OTHER	119	87	8	24	30	-7	3
1975-1979							
TOT	4940	4228	-4	716	797	-81	-
AGR	152	335	-50	-134	-73	-60	1
WAT	5	27	-2	-20	-11	-9	1
FOR	23	38	-28	13	17	-4	3
MAN	2620	1912	92	615	600	16	4
CON	622	404	157	61	66	-5	3
CRA	74	61	-11	24	30	-6	3
TRC	223	336	-84	-29	-36	6	2
TRD	910	893	-118	135	137	-2	3
TOU	81	78	-19	23	38	-16	3
HSN	36	31	-4	9	7	2	4
OTHER	194	113	62	19	23	-4	3

1979–1983							
TOT	522	475	135	-88	-192	105	-
AGR	44	31	158	-146	-92	-53	1
WAT	24	2	4	18	12	5	4
FOR	22	4	8	11	13	-2	3
MAN	1254	225	647	382	360	22	4
CON	-459	49	-535	27	29	-3	3
CRA	-34	7	25	-66	-78	12	2
TRC	-249	33	10	-292	-377	85	2
TRD	-55	97	-203	51	51	-1	3
TOU	5	8	11	-15	-24	9	2
HSN	46	3	7	35	26	10	4
OTHER	-75	14	4	-94	-113	20	2
1983–1990							
TOT	-1047	-1076	124	-96	-116	20	-
AGR	-176	-72	211	-316	-224	-91	1
WAT	16	-6	-2	25	15	10	4
FOR	10	-9	-12	32	37	-5	3
MAN	1287	-567	676	1178	1069	109	4
CON	-642	-82	-305	-255	-274	19	2
CRA	-32	-13	-48	29	44	-15	3
TRC	40	-59	160	-61	-101	40	2
TRD	-1459	-210	-483	-766	-769	3	2
TOU	-109	-19	-76	-14	-24	10	2
HSN	-48	-10	4	-42	-25	-17	1
OTHER	66	-27	-2	95	138	-43	3

Water management and manufacturing remained comparatively good sectors which Macedonia specialized in, while it did not specialize in forestry, artisanship and “other activities” although these sectors were comparatively good. Macedonia did not specialize in four (construction, transport and communication, trade and catering and tourism) out of the six comparatively inferior sectors (Type 2), while it did specialize in agriculture and housing, both of which were comparatively bad sectors (Type 1).

SLOVENIA

Table 1.37 gives the results of the shift-share analysis of Slovenia's GDP. In the first, third and fourth sub-period (1952-1960, 1965-1970 and 1970-1975) real change was bigger than hypothetical, while in all of the other sub-periods the situation was the reverse.

In the 1952-1960 sub-period real change (8183 million dinars) was bigger than proportional share (7359 million dinars). Manufacturing (1629 million dinars) contributed the most to the positive structural shift (860 million dinars), but also impacted the most (-929 million dinars) on the negative differential shift (-36 million dinars).

Forestry was the only comparatively good sector which Slovenia specialized in. Agriculture, water management, construction, transport and communication, trade and catering and tourism were also comparatively good sectors, but Slovenia did not specialize in any of them. The Type 2 allocation effect characterized the "other activities" sector, and Type 1 manufacturing and artisanship.

In the 1960-1965 sub-period real change (7556 million dinars) was smaller than proportional share (8107 million dinars) owing to the negative differential shift (-677 million dinars) being higher than the positive structural shift (-125 million dinars). Manufacturing was responsible for the highest negative differential (-1207 million dinars) and the highest positive structural shift (984 million dinars).

In this sub-period the Type 4 allocation effect did not characterize any sector. Agriculture, water management, transport and communication and trade were the Type 3 allocation effect sectors, whereas construction and "other activities" were Type 2. In this sub-period Slovenia specialized in three comparatively inferior sectors (forestry, manufacturing and catering and tourism).

The next sub-period (1965-1970) was marked by real change (8875 million dinars) being higher than proportional share (7718 million dinars). The structural shift reached only 12 million dinars, and the positive differential shift was 1170 million dinars. Manufacturing saw the highest negative structural (-457 million dinars) and the highest positive differential shift (1136 million dinars).

Out of four comparatively good sectors Slovenia specialized in two – manufacturing and trade, while it did not specialize in housing and "other activities." Type 2 allocation effect sectors predominated; agriculture, water management, forestry, construction, artisanship and transport and communication. Catering and tourism was characterized by the Type 1 allocation effect. The positive values of both shifts (structural – 415 and differential – 1158 million dinars) in the 1970-1975 sub-period caused real change (13161 million dinars) to exceed expected share (11587 million dinars). Manufacturing registered the highest positive structural shift (1442 million dinars) and construction the highest positive differential shift (7071 million dinars).

In this sub-period Slovenia had six comparatively good sectors of which it specialized in only one (artisanship), while failing to specialize in agriculture, water

management, forestry, construction and “other activities.” The number of Type 2 allocation effect sectors in this sub-period compared to the preceding one was reduced to three: transport and communication, catering and tourism and housing. Manufacturing and trade were characterized by the Type 1 allocation effect.

In the 1975–1979 sub-period the negative differential shift (-1640 million dinars) being higher than the positive structural shift (139 million dinars) produced real change (12702 million dinars) smaller than proportional share (14202 million dinars). Construction registered the highest positive structural shift (585 million dinars) and manufacturing the highest negative differential shift (-1739 million dinars).

In this sub-period Slovenia did not specialize in any comparatively good sector. The republic failed to specialize in six comparatively good sectors: agriculture, water management, transport and communication, trade, catering and tourism and “other activities.” Forestry and housing were Type 2 allocation effect sectors. Manufacturing, construction and trade were the worst (Type 1) allocation effect sectors.

In the 1979–1983 sub-period real change in Slovenia’s GDP (807 million dinars) was smaller than proportional share (1494 million dinars), as a result of the negative differential shift (-839 million dinars) exceeding the positive structural shift (152 million dinars). Manufacturing contributed the most to the positive structural shift (2092 million dinars) and trade to the negative differential shift (-752 million dinars).

In this sub-period Slovenia had five comparatively good sectors of which it specialized in two – manufacturing and artisanship. It did not specialize in the remaining three – agriculture, transport and communication and “other activities.” Forestry, construction, trade, catering and tourism and housing were Type 2 sectors, and water management Type 1.

Table 1.37 SLOVENIA'S GDP: SHISHA RESULTS

Sector	Real change	Proportional share	Structural shift	Differential shift			
				Total	Net differential shift	Allocation effect	
						Amount	Type
1952–1960							
TOT	8183	7359	860	-36	641	-677	-
AGR	119	207	-95	7	17	-10	3
WAT	15	27	-16	4	6	-2	3
FOR	2	424	-422	0	0	0	4
MAN	4057	3356	1629	-929	-636	-293	1
CON	856	789	-485	551	876	-325	3
CRA	197	138	67	-8	-7	-1	1

TRC	866	596	183	87	105	-18	3
TRD	1503	1117	176	211	244	-33	3
TOU	363	467	-193	89	90	-2	3
HSN	-	-	-	-	-	-	-
OTHER	204	237	15	-48	-55	6	2
1960–1965							
TOT	7556	8107	125	-677	-400	-277	-
AGR	206	168	-47	85	213	-128	3
WAT	26	22	-6	10	15	-5	3
FOR	9	214	-184	-21	-21	-0	1
MAN	3649	3873	984	-1207	-987	-220	1
CON	643	858	-99	-116	-128	11	2
CRA	144	176	-26	-5	-5	-0	1
TRC	534	766	-311	80	95	-16	3
TRD	1992	1371	196	425	477	-52	3
TOU	58	430	-355	-17	-17	-1	1
HSN	(123)	0	0	(123)	0	(123)	-
OTHER	171	229	-26	-32	-43	11	2
1965–1970							
TOT	8875	7718	-12	1170	1032	138	-
AGR	133	177	-32	-12	-25	13	2
WAT	17	23	-3	-3	-4	1	2
FOR	14	139	-124	-0	-0	0	2
MAN	4380	3700	-457	1136	1008	128	4
CON	796	764	171	-139	-157	18	2
CRA	117	161	-79	35	32	4	2
TRC	704	668	94	-58	-65	7	2
TRD	2369	1549	566	254	253	2	4
TOU	144	292	-31	-118	-112	-6	1
HSN	34	42	-12	4	5	-1	3
OTHER	168	204	-106	70	96	-26	3
1970–1975							
TOT	13161	11587	415	1158	1478	-320	-
AGR	282	239	-24	67	144	-78	3
WAT	37	31	-3	9	12	-3	3

FOR	59	155	-96	0	0	-0	3
MAN	7019	5602	1442	-25	-21	-4	1
CON	1686	1116	-502	1071	1312	-241	3
CRA	410	216	88	106	93	13	4
TRC	815	979	-139	-26	-30	5	2
TRD	2283	2542	-180	-79	-79	-1	1
TOU	194	368	-165	-9	-10	1	2
HSN	24	58	-33	-1	-1	0	2
OTHER	352	281	26	45	58	-13	3
1975–1979							
TOT	12702	14202	139	-1640	-1037	-603	-
AGR	503	297	-44	250	521	-271	3
WAT	76	38	-2	40	51	-11	3
FOR	23	152	-111	-18	-20	2	2
MAN	5680	7075	342	-1736	-1536	-200	1
CON	1466	1501	585	-620	-608	-12	1
CRA	238	317	-60	-20	-16	-4	1
TRC	1063	1106	-275	232	288	-56	3
TRD	2555	2924	-388	19	20	-1	3
TOU	369	380	-95	84	97	-13	3
HSN	43	58	-8	-7	-10	3	2
OTHER	685	355	194	136	175	-39	3
1979–1983							
TOT	807	1494	152	-839	-759	-80	-
AGR	369	37	188	144	241	-97	3
WAT	-32	5	8	-45	-45	-0	1
FOR	30	13	27	-10	-11	1	2
MAN	2832	727	2092	12	11	1	4
CON	-1873	161	-1750	-285	-299	15	2
CRA	185	32	115	38	31	8	4
TRC	214	118	34	62	71	-9	3
TRD	-1087	306	-641	-752	-760	8	2
TOU	-4	41	53	-97	-103	6	2
HSN	2	6	12	-16	-21	6	2
OTHER	171	47	14	110	128	-18	3

1983–1990							
TOT	-4980	-3335	128	-1773	-1354	-418	-
AGR	347	-104	305	145	222	-76	3
WAT	-26	-9	-3	-13	-17	3	2
FOR	-191	-31	-40	-120	-133	13	2
MAN	-2676	-1764	2104	-3017	-2729	-288	1
CON	-380	-247	-917	784	869	-85	3
CRA	-247	-82	-293	127	98	29	4
TRC	386	-273	737	-79	-88	9	2
TRD	-1553	-611	-1407	465	497	-32	3
TOU	-288	-89	-358	159	178	-19	3
HSN	-32	-13	5	-24	-35	11	2
OTHER	-320	-113	-6	-201	-217	17	2

In the final sub-period (1983–1990) real change in GDP (-4980 million dinars) was smaller than proportional share (-3335 million dinars), which was the consequence of the negative differential shift (-1773 million dinars) exceeding the positive structural shift (128 million dinars). Manufacturing was the most responsible for both the positive structural (2104 million dinars) and the negative differential shift (-3017 million dinars).

In this sub-period, too, artisanship was the only Type 4 allocation effect sector in Slovenia. There were four Type 3 sectors (agriculture, construction, trade and catering and tourism), five were Type 2 (water management, forestry, transport and communication, housing and “other activities”) with one Type 1 sector (manufacturing).

SERBIA

Table 1.38 shows the results of the shift-share analysis of Serbia's GDP. In all of the sub-periods (except for 1965–1970) this republic had a real change in GDP larger than suggested by its proportional share.

In the first surveyed sub-period (1953–1960) real change (16955 million dinars) exceeded Serbia's proportional share (14734 million dinars), which was the consequence of both shifts being positive. Manufacturing contributed the most to both the positive structural (358 million dinars) and positive differential shifts (1862 million dinars) with 2005 and 913 million dinars, respectively.

Agriculture and water management were characterized by the Type 4 allocation effect, while Type 3 characterized four sectors – forestry, manufacturing, con-

struction and transport and communication. There were no Type 2 sectors, whereas four (artisanship, trade, catering and tourism and “other activities”) were Type 1 allocation effect sectors.

As opposed to the preceding sub-period, in the 1960–1965 sub-period the positive differential shift exceeded the negative structural shift, which led to real change of GDP (of 17153 million dinars) being higher than proportional (16541 million dinars). The transport and communication sector was the most responsible for the negative structural shift (-496 million dinars) with -715 million dinars, and manufacturing for the positive differential shift (of 886 million dinars) with 904 million dinars.

Agriculture, water management and artisanship were Type 4 sectors, while three sectors (forestry, manufacturing and construction) were Type 3 sectors. The Type 2 allocation effect characterized transport and communication and catering and tourism, while trade and “other activities” were the worst type (Type 1).

In the 1965–1970 sub-period the negative differential shift (-874 million dinars) was almost more than double the positive structural shift (91 million dinars), which resulted in real change in GDP (15556 million dinars) being smaller than regional share (16340 million dinars). Trade registered the highest positive structural shift (1242 million dinars), while agriculture had the highest negative differential shift (-687 million dinars).

In this sub-period in Serbia five sectors were comparatively good, with one (“other activities”) characterized by the Type 4 allocation effect and four by the Type 3 allocation effect – forestry, construction, transport and communication and housing). Manufacturing and catering and tourism were Type 2 sectors, whereas the four remaining sectors (agriculture, water management, artisanship and trade) were Type 1.

In the 1970–1975 sub-period, a real change of 23654 million dinars exceeding proportional share (23341 million dinars), was the result of the positive differential shift (382 million dinars) surpassing the negative structural shift (-69 million dinars). Construction was responsible for the highest negative structural shift (-1301 million dinars), and manufacturing for the highest positive differential shift (1956 million dinars).

In this sub-period there were no Type 4 allocation effect sectors. Manufacturing, transport and communication and housing were Type 3 sectors, while Type 2 characterized forestry and catering and tourism. Agriculture, water management, construction, trade, artisanship and “other activities” were all Type 1.

Much like in the first sub-period, in the 1975–1979 sub-period as well both positive shifts had as a consequence a real change in GDP of 29335 million dinars which surpassed the hypothetical change (27700 million dinars). Construction, with 1094 million dinars, contributed the most to the positive structural shift (170 million dinars), and manufacturing (1019 million dinars) to a positive differential shift (1465 million dinars).

Water management and trade were characterized by the Type 4 allocation effect, while forestry, manufacturing, construction, artisanship, catering and tourism, and housing sectors were Type 3 sectors. Type 2 characterized transport and communication, while two sectors – agriculture and “other activities” – were Type 1.

As in the 1970–1975 sub-period, in the 1979–1983 sub-period, too, a real change (4201 million dinars) that was higher than proportional share (3032 million dinars) was caused by the positive differential shift (1269 million dinars) being higher than the negative structural shift (-100 million dinars). Construction was the most responsible for the negative structural shift (-3870 million dinars), and manufacturing for the positive differential shift (1585 million dinars).

Table 1.38 SERBIA'S GDP: SHISHA RESULTS

Sector	Real change	Proportional share	Structural shift	Differential shift			
				Total	Net differential shift	Allocation effect	
						Amount	Type
1952–1960							
TOT	16955	14734	358	1862	1883	-21	-
AGR	1501	1366	-626	761	560	200	4
WAT	95	94	-55	55	49	6	4
FOR	21	233	-232	20	67	-47	3
MAN	7048	4130	2005	913	1016	-104	3
CON	1277	2345	-1439	371	398	-26	3
CRA	355	277	135	-58	-48	-9	1
TRC	1932	1431	440	61	61	-0	3
TRD	3490	3128	492	-130	-107	-22	1
TOU	504	988	-408	-76	-73	-3	1
HSN	-	-	-	-	-	-	-
OTHER	732	742	47	-56	-41	-15	1
1960–1965							
TOT	17153	16541	-273	886	843	43	-
AGR	1130	1495	-422	57	33	24	4
WAT	78	99	-26	5	3	2	4
FOR	72	128	-110	54	180	-126	3
MAN	8270	5874	1492	904	994	-90	3
CON	1774	1866	-214	122	125	-4	3

CRA	306	330	-50	26	25	0	4
TRC	962	1760	-715	-83	-88	5	2
TRD	3552	3452	493	-393	-358	-35	1
TOU	101	768	-633	-34	-37	3	2
HSN	(272)	0	0	(272)	0	(272)	-
OTHER	636	767	-87	-44	-36	-8	1
1965-1970							
TOT	15556	16340	91	-874	-634	-240	-
AGR	405	1333	-241	-687	-395	-292	1
WAT	34	89	-10	-45	-30	-15	1
FOR	11	106	-95	0	0	-0	3
MAN	5071	6547	-808	-668	-709	41	2
CON	2626	1788	400	437	446	-9	3
CRA	152	314	-154	-8	-8	-0	1
TRC	1719	1444	203	72	78	-7	3
TRD	4625	3401	1242	-18	-17	-1	1
TOU	330	521	-55	-135	-153	18	2
HSN	76	93	-26	9	12	-2	3
OTHER	507	703	-365	169	142	27	4
1970-1975							
TOT	23654	23341	-69	382	670	-288	-
AGR	1411	1586	-161	-14	-9	-5	1
WAT	87	109	-10	-12	-9	-3	1
FOR	44	118	-73	-1	-3	2	2
MAN	13179	8924	2298	1956	2109	-152	3
CON	956	2895	-1301	-637	-606	-31	1
CRA	302	395	160	-252	-244	-9	1
TRC	1914	2189	-310	35	37	-2	3
TRD	4637	5369	-380	-352	-334	-18	1
TOU	340	683	-307	-36	-43	7	2
HSN	76	128	-73	21	25	-4	3
OTHER	707	945	87	-325	-253	-73	1
1975-1979							
TOT	29335	27700	170	1465	1852	-387	-
AGR	867	1820	-270	-684	-453	-231	1
WAT	118	122	-7	4	3	1	4

FOR	33	116	-85	2	5	-3	3
MAN	13500	11907	575	1019	1044	-26	3
CON	4856	2806	1094	957	979	-23	3
CRA	461	437	-82	106	121	-16	3
TRC	1767	2501	-621	-113	-121	8	2
TRD	5663	6115	-811	358	347	11	4
TOU	735	699	-174	210	257	-47	3
HSN	141	135	-18	24	27	-3	3
OTHER	1194	1042	570	-417	-358	-60	1
1979–1983							
TOT	4201	3032	-100	1269	1089	180	-
AGR	947	172	864	-88	-65	-23	1
WAT	80	13	21	46	36	10	4
FOR	7	10	22	-25	-70	45	2
MAN	6729	1327	3817	1585	1615	-30	3
CON	-3660	356	-3870	-146	-141	-5	3
CRA	101	48	170	-117	-129	11	2
TRC	-591	251	72	-914	-1002	88	2
TRD	357	648	-1358	1067	1033	34	4
TOU	-97	76	99	-272	-313	41	2
HSN	38	15	30	-7	-7	1	2
OTHER	290	116	35	139	132	7	4
1983–1990							
TOT	-3340	-6917	68	3510	3644	-135	-
AGR	997	-432	1275	155	117	38	4
WAT	-65	-33	-12	-20	-15	-5	1
FOR	2	-24	-31	56	168	-112	3
MAN	1957	-3307	3946	1318	1319	-1	3
CON	-2599	-575	-2131	107	106	1	1
CRA	-343	-111	-399	167	196	-29	3
TRC	1480	-518	1402	596	727	-131	2
TRD	-3956	-1448	-3332	823	771	53	1
TOU	-1010	-163	-650	-197	-251	54	2
HSN	172	-35	14	192	215	-23	3
OTHER	25	-273	-15	313	291	21	4

The Type 4 allocation effect characterized water management, trade and “other activities” and Type 3 manufacturing and construction. Forestry, artisanship, transport and communication, catering and tourism, and housing were Type 2 sectors, while agriculture was Type 1.

In the 1983–1990 sub-period an absolute drop in GDP occurred: real change (-3340 million dinars) exceeded proportional change (-6917 million dinars). This was the result of a positive differential shift (3510 million dinars) and a somewhat smaller, positive structural shift (68 million dinars). Manufacturing contributed the most to the positive value of both shifts.

One sector (water management) was characterized by the Type 1 allocation effect and one, catering and tourism, by Type 2. Type 3 sectors (efficient but not specialized) predominated: forestry, manufacturing, transport and communication and housing, while agriculture, construction, trade and “other activities” were efficient sectors which Serbia specialized in.

Central Serbia

Table 1.39 shows the results of the shift-share analysis of central Serbia's GDP. What is characteristic of this region is that every sub-period in which real change exceeded proportional share was regularly followed by a sub-period in which real change was smaller than hypothetical change.

In the first sub-period (1952–1960) both shifts were positive: the structural reached 210 million dinars and the differential 632 million dinars. As a result, real change (11123 million dinars) was around 10% higher than proportional share (10281 million dinars).

In this sub-period catering and tourism was the sole comparatively good sector which central Serbia specialized in (Type 4 allocation effect). Agriculture, water management, forestry and manufacturing were Type 3. There were no Type 2 allocation effect sectors. Sectors in which the situation was the worst (Type 1) predominated: construction, artisanship, transport and communication, trade and “other activities.”

In the 1960–1965 sub-period real change (19707 million dinars) was below proportional share (11160 million dinars). This was due to both shifts being negative (-49 and -405 million dinars, respectively). Transport and communication were the most responsible for the negative structural shift (-538 million dinars) and trade for the negative differential shift (-376 million dinars).

In this sub-period two sectors (artisanship and “other activities”) were of the best allocation effect type – Type 4. Agriculture, forestry and catering and tourism were Type 3 and manufacturing Type 2. Once again Type 1 sectors predominated – water management, construction, transport and communication and trade.

In the 1965–1970 sub-period both shifts were positive (the structural was 222 and differential 89 million dinars). Consequently, real change (11040 million dinars) exceeded hypothetical change (10728 million dinars). Trade contributed the most to the positive structural shift (876 million dinars) and construction to the positive differential shift (193 million dinars).

In this sub-period there were as many as four Type 4 allocation effect sectors: construction, artisanship, trade and “other activities.” Three sectors (forestry, artisanship and housing) were Type 3, while agriculture and manufacturing, which central Serbia specialized in, were comparatively bad (Type 2 allocation effect). Water management and catering and tourism fared the worst, being of the Type 1 allocation effect.

In the 1970–1975 sub-period real change of GDP (14948 million dinars) was below hypothetical change (15630 million dinars), since both shifts were negative; the structural was -135 million dinars, and the differential -546 million dinars. Construction was the most responsible for their negative values, with a structural shift of -968 million dinars and differential of -910 million dinars.

In this sub-period only the transport and communication sector was Type 4, while manufacturing and housing were Type 3. Serbia did not specialize in four out of the eight comparatively inferior sectors (agriculture, water management, forestry and catering and tourism) marked as Type 2, while specializing in four others (construction, artisanship, trade and “other activities”), which led to them being classified as Type 1 allocation effect sectors.

In the 1975–1979 sub-period real change of GDP (20859 million dinars) again exceeded proportional share (18265 million dinars), as both shifts were positive. With 760 million dinars, construction contributed the most to the positive structural shift (225 million dinars), while manufacturing, with 1322 million dinars, contributed the most to the positive differential shift (2370 million dinars).

Construction and trade were two comparatively good sectors which central Serbia specialized in. It did not specialize in the agriculture, forestry, manufacturing, artisanship, catering and tourism, and housing sectors. Water management was the only Type 2 allocation effect sector, while transport and communication and “other activities” were comparatively inferior sectors in which central Serbia specialized in.

In the 1979–1983 sub-period real change in GDP (1577 million dinars) was below hypothetical (2039 million dinars), which was the result of the negative structural shift (-639 million dinars) exceeding the positive differential shift (176 million dinars). Construction was the most responsible for the negative structural shift with -2790 million dinars, while manufacturing contributed the most to the positive differential shift.

Trade and “other activities” were comparatively good sectors in this sub-period which central Serbia specialized in, while the region did not specialize in the other three comparatively good sectors (agriculture, water management and manufactur-

ing). Forestry, artisanship and catering and tourism were comparatively bad sectors (Type 2 allocation effect) which the region did not specialize in, while construction, transport and communication and housing were comparatively bad sectors (Type 1 allocation effect) in which the region specialized in.

Table 1.39 GDP OF CENTRAL SERBIA: SHISHA RESULTS

Sector	Real change	Proportional share	Structural shift	Differential shift			
				Total	Net differential shift	Allocation effect	
						Amount	Type
1952–1960							
TOT	11123	10281	210	632	1231	-599	-
AGR	326	327	-150	149	318	-170	3
WAT	46	45	-26	27	35	-8	3
FOR	6	146	-145	5	20	-15	3
MAN	5111	2655	1289	1167	1411	-244	3
CON	696	2172	-1333	-143	-115	-28	1
CRA	243	205	100	-62	-49	-13	1
TRC	1412	1122	345	-55	-49	-6	1
TRD	2340	2402	378	-440	-330	-109	1
TOU	404	677	-280	6	6	0	4
HSN	-	-	-	-	-	-	-
OTHER	539	529	33	-24	-17	-7	1
1960–1965							
TOT	10707	11160	-49	-405	-419	14	-
AGR	250	340	-96	6	9	-4	3
WAT	35	47	-12	-0	-0	-0	1
FOR	58	77	-66	47	178	-131	3
MAN	4987	4089	1038	-140	-150	9	2
CON	1270	1466	-168	-28	-25	-3	1
CRA	231	234	-35	32	30	2	4
TRC	576	1325	-538	-211	-200	-10	1
TRD	2444	2468	352	-376	-323	-53	1
TOU	105	558	-460	7	7	-0	3
HSN	(187)	0	0	(187)	0	(187)	-
OTHER	565	556	-63	72	54	17	4

1965–1970							
TOT	11040	10728	222	89	-32	121	-
AGR	171	301	-54	-76	-126	51	2
WAT	24	42	-5	-13	-12	-1	1
FOR	7	68	-61	0	0	-0	3
MAN	3508	4294	-530	-256	-273	16	2
CON	1860	1363	305	193	169	23	4
CRA	127	227	-111	11	10	1	4
TRC	1314	1036	146	132	132	-0	3
TRD	3288	2398	876	13	12	1	4
TOU	304	389	-41	-44	-44	-0	1
HSN	62	64	-18	16	19	-3	3
OTHER	376	546	-283	114	81	33	4
1970–1975							
TOT	14948	15630	-135	-546	-258	-288	-
AGR	260	387	-39	-88	-158	71	2
WAT	36	54	-5	-13	-13	0	2
FOR	29	76	-47	-0	-0	0	2
MAN	8586	5921	1525	1141	1241	-100	3
CON	276	2154	-968	-910	-779	-131	1
CRA	162	292	118	-248	-217	-31	1
TRC	1429	1600	-227	55	54	1	4
TRD	3307	3796	-268	-221	-198	-23	1
TOU	239	531	-239	-53	-55	2	2
HSN	62	92	-52	23	25	-2	3
OTHER	562	727	67	-232	-157	-75	1
1975–1979							
TOT	20859	18265	225	2370	2525	-155	-
AGR	401	418	-62	45	86	-41	3
WAT	50	58	-4	-5	-5	0	2
FOR	27	75	-55	7	19	-12	3
MAN	9550	7849	379	1322	1355	-33	3
CON	3731	1949	760	1022	993	29	4
CRA	310	303	-57	64	69	-6	3
TRC	1380	1838	-457	-1	-1	-0	1
TRD	3899	4333	-575	141	127	14	4

TOU	522	535	-133	120	126	-6	3
HSN	110	99	-13	24	24	-0	3
OTHER	880	807	441	-368	-269	-100	1
1979–1983							
TOT	1577	2039	-639	176	303	-127	-
AGR	421	45	225	152	292	-140	3
WAT	75	6	10	59	67	-8	3
FOR	7	7	14	-14	-40	26	2
MAN	4540	891	2565	1084	1105	-21	3
CON	-2952	257	-2790	-420	-378	-42	1
CRA	113	33	117	-37	-39	3	2
TRC	-590	186	53	-830	-823	-6	1
TRD	-200	456	-956	299	277	23	4
TOU	-159	57	74	-291	-300	9	2
HSN	21	11	22	-12	-12	-0	1
OTHER	301	89	26	186	155	30	4
1983–1990							
TOT	538	-4580	-504	5622	5788	-166	-
AGR	579	-122	361	340	599	-258	2
WAT	-41	-18	-6	-17	-16	-2	1
FOR	-13	-16	-21	23	68	-45	3
MAN	1982	-2223	2653	1553	1519	33	4
CON	-1003	-396	-1469	862	814	49	4
CRA	-170	-79	-284	193	209	-17	3
TRC	1797	-377	1019	1155	1275	-120	3
TRD	-2175	-993	-2286	1104	991	113	1
TOU	-662	-117	-469	-75	-88	12	2
HSN	151	-25	11	166	167	-1	3
OTHER	93	-213	-12	318	249	69	4

In the final sub-period (1983–1990) real change (538 million dinars) exceeded hypothetical change (-4580 million dinars) owing to the positive differential shift (5622 million dinars) exceeding the negative structural shift (-504 million dinars). Trade was the most responsible for the negative structural shift with -2286 million dinars, while manufacturing contributed the most to the positive differential shift (2653 million dinars).

Manufacturing, trade, construction and “other activities” were comparatively good sectors which central Serbia specialized in, while the region did not specialize in agriculture, forestry, artisanship, transport and communication and housing, although these sectors were comparatively good as well. Of the two comparatively inferior sectors, Serbia did not specialize in catering and tourism (Type 2), although it specialized in water management, leading to this sector being classified as a Type 1 allocation effect sector.

Kosovo and Metohia

Table 1.40 gives the results of the shift-share analysis of Kosovo and Metohia's GDP. In three sub-periods (1952-1960, 1975-1979 and 1983-1990) real change in GDP was below hypothetical change, whereas in all of the other sub-periods it was above that which Kosovo and Metohia's proportional share suggested.

In the 1952-1960 sub-period the negative differential shift exceeded the positive structural shift, causing real change (499 million dinars) to be smaller than regional share (788 million dinars). Manufacturing contributed the most (with 134 million dinars) to the positive structural shift (49 million dinars), but it was also responsible for the negative differential shift (-338 million dinars) with -174 million dinars.

In this sub-period there were no comparatively good sectors which Kosovo and Metohia specialized in. Construction and catering and tourism were comparatively good sectors, but the province did not specialize in them. The Type 2 allocation effect characterized forestry, artisanship, transport and communication and trade, while agriculture, water management, manufacturing and “other activities” were Type 1 sectors.

In the 1960-1965 sub-period real change (1107 million dinars) exceeded proportional share (664 million dinars) thanks to both shifts being positive (structural of 5 and differential of 437 million dinars). Manufacturing gave the biggest contribution to both shifts (68 and 197 million dinars, respectively). In this sub-period four sectors were Type 4: water management, manufacturing, construction and trade. The sectors of agriculture, artisanship and transport and communication were Type 3, and forestry and catering and tourism were Type 2. “Other activities” were characterized by the Type 1 allocation effect.

The next sub-period (1965-1970) saw real change (809 million dinars) again exceed proportional share (799 million dinars). The negative structural shift of -13 million dinars was surpassed by a positive differential shift of 23 million dinars. Manufacturing had the biggest negative structural shift (-43 million dinars) and the biggest positive differential shift (55 million dinars).

Of the five comparatively good sectors Kosovo and Metohia specialized in two – manufacturing and construction, but did not specialize in forestry, trade and housing. The Type 2 allocation effect characterized artisanship, transport and com-

munication and catering and tourism, and Type 1 – agriculture, water management and “other activities.”

Both positive shifts (a structural shift of 16 and differential of 417 million dinars) led to real change (1592 million dinars) in the 1970-1975 sub-period exceeding the expected share (1159 million dinars). Manufacturing generated the largest positive structural shift (132 million dinars) and the biggest positive differential shift (304 million dinars).

Much like in the preceding sub-period, in this one, also, there were five comparatively good sectors in Kosovo and Metohia, of which the province specialized in two – manufacturing and construction, while failing to do so in transport and communication, catering and tourism and housing. The number of Type 2 allocation effect sectors remained unchanged (forestry, artisanship and trade). Like in the preceding sub-period, agriculture, water management and “other activities” were characterized by the Type 1 allocation effect.

A negative differential shift (of -506 million dinars) in the 1975–1979 sub-period resulted in real change in GDP (1055 million dinars) being lower than proportional share (1509 million dinars) as the positive structural shift amounted to only 53 million dinars. Construction was responsible for the biggest positive structural shift (92 million dinars) and the biggest negative differential shift (-266 million dinars).

In this sub-period there were no comparatively good sectors which the province specialized in. The four comparatively good sectors which Kosovo and Metohia did not specialize in were artisanship, trade, catering and tourism, and “other activities.” Forestry, transport and communication and housing were of the Type 2 allocation effect. Four sectors – agriculture, water management, manufacturing and construction – were characterized by the worst allocation effect type.

In the 1979–1983 sub-period real change (253 million dinars) exceeded proportional share (151 million dinars) substantially. This was due to the positive differential shift (117 million dinars) being much higher than the negative structural shift (-15 million dinars).

Construction was the most responsible for the negative structural shift (-226 million dinars) and agriculture for the positive differential shift (72 million dinars).

There were seven comparatively good sectors and Kosovo and Metohia specialized in three – agriculture, water management and construction. It did not specialize in the remaining four – transport and communication, trade, housing and “other activities.” The Type 2 allocation effect characterized forestry, artisanship and catering and tourism, while manufacturing was Type 1.

In the final sub-period (1983–1990) real change (-1260 million dinars) was significantly below proportional share (-347 million dinars), which was the consequence of a negative differential shift (-920 million dinars) and a slightly positive structural shift (7 million dinars). Manufacturing contributed the most to the positive structural and negative differential shift (210 and -405 million dinars, respectively).

Table 1.40 GDP OF KOSOVO AND METOHIA: SHISHA RESULTS

Sector	Real change	Proportional share	Structural shift	Differential shift			
				Total	Net differential shift	Allocation effect	
						Amount	Type
1952–1960							
TOT	499	788	49	-338	-23	-315	-
AGR	-57	121	-56	-122	-54	-68	1
WAT	-4	10	-6	-8	-4	-4	1
FOR	-4	33	-33	-4	-5	1	2
MAN	237	277	134	-174	-155	-20	1
CON	125	45	-27	107	323	-216	3
CRA	4	11	5	-13	-14	2	2
TRC	27	59	18	-50	-65	15	2
TRD	114	135	21	-43	-44	1	2
TOU	26	31	-13	8	13	-5	3
HSN	-	-	-	-	-	-	-
OTHER	31	65	4	-39	-17	-22	1
1960–1965							
TOT	1107	664	5	437	480	-43	-
AGR	136	30	-9	114	130	-16	3
WAT	11	3	-1	9	9	0	4
FOR	-1	15	-12	-3	-4	1	2
MAN	532	267	68	197	192	5	4
CON	115	90	-10	36	31	5	4
CRA	15	7	-1	9	16	-7	3
TRC	77	44	-18	50	85	-35	3
TRD	175	129	18	27	26	1	4
TOU	5	30	-24	-0	-0	0	2
HSN	(9)	0	0	(9)	0	(9)	-
OTHER	33	50	-6	-11	-6	-5	1
1965–1970							
TOT	809	799	-13	23	41	-18	-
AGR	16	66	-12	-38	-22	-16	1
WAT	1	5	-1	-4	-2	-2	1

FOR	1	9	-8	0	0	-0	3
MAN	363	351	-43	55	54	2	4
CON	132	96	22	15	14	1	4
CRA	3	10	-5	-2	-4	1	2
TRC	58	54	8	-4	-5	2	2
TRD	212	142	52	18	21	-2	3
TOU	12	20	-2	-6	-9	3	2
HSN	4	3	-1	2	3	-1	3
OTHER	7	43	-22	-14	-9	-4	1
1970-1975							
TOT	1592	1159	16	417	420	-2	-
AGR	50	77	-8	-19	-13	-6	1
WAT	4	6	-1	-2	-1	-1	1
FOR	3	10	-6	-1	-1	0	2
MAN	948	512	132	304	284	20	4
CON	325	152	-68	241	217	25	4
CRA	12	12	5	-4	-7	3	2
TRC	84	80	-11	15	22	-7	3
TRD	173	231	-16	-42	-45	4	2
TOU	37	26	-12	22	34	-12	3
HSN	7	5	-3	5	8	-3	3
OTHER	-51	49	4	-104	-78	-26	1
1975-1979							
TOT	1055	1509	53	-506	-342	-165	-
AGR	5	82	-12	-65	-52	-13	1
WAT	4	7	-0	-2	-2	-1	1
FOR	2	10	-7	-1	-1	0	2
MAN	532	744	36	-248	-222	-26	1
CON	61	235	92	-266	-177	-89	1
CRA	22	14	-3	11	21	-10	3
TRC	48	96	-24	-24	-36	12	2
TRD	262	255	-34	41	52	-11	3
TOU	59	34	-9	33	45	-12	3
HSN	1	6	-1	-5	-6	1	2
OTHER	59	26	14	19	36	-17	3

1979–1983							
TOT	253	151	-15	117	154	-37	-
AGR	113	7	34	72	66	5	4
WAT	11	1	1	9	7	2	4
FOR	2	1	2	-1	-1	0	2
MAN	202	75	215	-88	-79	-9	1
CON	-181	21	-226	25	20	4	4
CRA	-4	2	6	-11	-17	6	2
TRC	38	9	3	26	40	-13	3
TRD	31	28	-58	61	69	-8	3
TOU	-14	4	6	-24	-24	0	2
HSN	3	1	1	1	2	-1	3
OTHER	52	4	1	47	71	-24	3
1983–1990							
TOT	-1260	-347	7	-920	-979	59	-
AGR	141	-22	64	99	75	24	4
WAT	1	-2	-1	4	2	2	1
FOR	-10	-2	-3	-6	-10	4	3
MAN	-371	-176	210	-405	-381	-24	4
CON	-389	-36	-132	-222	-178	-44	1
CRA	-20	-4	-13	-3	-6	3	3
TRC	-129	-22	60	-167	-238	72	2
TRD	-386	-63	-144	-179	-195	15	3
TOU	-55	-9	-35	-11	-13	2	2
HSN	-3	-1	1	-2	-3	1	2
OTHER	-39	-11	-1	-27	-32	4	2

In this sub-period there were two sectors in Kosovo and Metohia characterized by the Type 4 allocation effect (agriculture and water management), seven were Type 2 (forestry, artisanship, trade, transport and communication, catering and tourism, housing and “other activities”) and two Type 1 (manufacturing and construction).

Vojvodina

The results of the shift-share analysis of Vojvodina's GDP are shown in *Table 1.41*. In four sub-periods (1951–1960, 1960–1965, 1970–1975 and 1979–1983) the province had a real change of GDP bigger than suggested by its regional share, while in the other three sub-periods the situation was the reverse.

In the first surveyed sub-period (1952–1960) real change (5333 million dinars) exceeded proportional share (3665 million dinars), as a result of both shifts being positive. Manufacturing (582 million dinars) contributed the most to the positive structural shift (100 million dinars), while agriculture (638 million dinars) contributed the most to the positive differential shift (735 million dinars).

The Type 4 allocation effect manifested itself in agriculture, water management, artisanship and “other activities,” while the Type 3 allocation effect characterized forestry, construction, transport and communication and trade. There were no Type 2 sectors, while two were Type 1 (manufacturing and catering and tourism).

In the 1960–1965 sub-period the positive differential shift was above the negative structural shift leading to real change (5340 million dinars) being higher than proportional (4716 million dinars). Agriculture (with -317 million dinars) was the most responsible for the negative structural shift (-229 million dinars), while manufacturing (with 847 million dinars) contributed the most to the positive differential shift (853 million dinars).

There were no Type 4 allocation effect sectors, while forestry, manufacturing, construction and transport and communication were Type 3 sectors. Type 2 characterized four sectors: artisanship, trade, catering and tourism and “other activities.” Type 1, the worst kind of allocation effect, was registered in agriculture and water management.

In the 1965–1970 sub-period the fact that both shifts were negative (the structural was -118 and differential -986 million dinars) led to real change in GDP (3707 million dinars) being below proportional share (4812 million dinars). Manufacturing had the highest negative structural shift (-235 million dinars) and agriculture the highest negative differential shift (-573 million dinars).

Vojvodina did not specialize in any of its comparatively good sectors and therefore forestry, construction and “other activities” were characterized by the Type 3 allocation effect. Type 2 sectors predominated: manufacturing, artisanship, transport and communication, trade, catering and tourism and housing. Agriculture and water management were Type 1 sectors.

In the 1970–1975 sub-period both positive shifts (a structural of 50 and differential of 511 million dinars) caused real change (7114 million dinars) to be higher than proportional share (6552 million dinars). Manufacturing had the highest structural shift (642 million dinars) and also the highest differential shift (512 million dinars).

Agriculture and water management were Type 4 allocation effect sectors, while manufacturing, construction and “other activities” were Type 3. The Type 2 allocation effect characterized all of the other sectors.

In the 1975–1979 sub-period real change (7421 million dinars) was below hypothetical (7926 million dinars) because both shifts were negative. Trade (with -203 million dinars) was the most responsible for the negative structural shift (-108 million dinars), and agriculture (with -663 million dinars) for the negative differential shift (-398 million dinars).

Water management was the only Type 4 allocation effect sector in this sub-period, while construction, artisanship, trade, catering and tourism, and housing were of the Type 3 allocation effect. Type 2 characterized forestry, manufacturing, transport and communication and “other activities,” while agriculture was Type 1.

In the 1979–1983 sub-period real change (2372 million dinars) was substantially higher than hypothetical (842 million dinars). Manufacturing (with 1037 million dinars) contributed the most to the positive structural shift (554 million dinars), also contributing the most (590 million dinars) to the positive differential shift (976 million dinars).

There were no Type 4 allocation effect sectors in this sub-period in the province. Type 3 appeared in manufacturing, construction, trade, catering and tourism, and housing. Forestry, artisanship, transport and communication and “other activities” were sectors characterized by the Type 2 allocation effect, while agriculture and water management were Type 1 allocation effect sectors.

In the final surveyed sub-period (1983–1990) real change (-2620 million dinars) was substantially smaller than proportional change (-1991 million dinars), as a consequence of the negative differential shift (-1194 million dinars) exceeding the positive structural shift (565 million dinars). Manufacturing (1083 million dinars) had the biggest positive structural shift, while construction (-534 million dinars) had the biggest negative differential shift.

Much like in the preceding sub-period, in this one, too, there were no Type 4 allocation effect sectors. Four sectors (forestry, manufacturing, housing and “other activities”) were of the Type 3 allocation effect, and the others (artisanship, construction, transport and communication and catering and tourism) were Type 2. Again, like in the preceding sub-period, agriculture and water management were characterized by the Type 1 allocation effect.

Table 1.41 GDP OF VOJVODINA: SHISHA RESULTS

Sector	Real change	Proportional share	Structural shift	Differential shift			
				Total	Net differential shift	Allocation effect	
						Amount	Type
1952–1960							
TOT	5333	3665	100	1568	2754	-1186	-
AGR	1231	917	-420	735	200	534	4
WAT	53	40	-23	36	19	17	4
FOR	19	54	-53	19	68	-50	3
MAN	1700	1198	582	-80	-76	-4	1
CON	456	129	-79	407	1976	-1569	3
CRA	108	61	30	17	16	1	4
TRC	493	250	77	166	237	-71	3
TRD	1036	591	93	353	384	-32	3
TOU	74	279	-115	-90	-76	-14	1
HSN	-	-	-	-	-	-	-
OTHER	162	147	9	6	5	1	4
1960–1965							
TOT	5340	4716	-229	853	1119	-267	-
AGR	745	1124	-317	-63	-14	-49	1
WAT	32	49	-13	-4	-1	-2	1
FOR	15	37	-32	10	32	-22	3
MAN	2751	1518	386	847	1028	-181	3
CON	389	311	-36	114	201	-87	3
CRA	60	89	-13	-16	-16	1	2
TRC	310	391	-159	77	105	-28	3
TRD	933	855	122	-44	-46	2	2
TOU	-9	180	-149	-40	-53	13	2
HSN	(76)	0	0	(76)	0	(76)	-
OTHER	38	161	-18	-105	-116	11	2
1965–1970							
TOT	3707	4812	-118	-986	-463	-523	-
AGR	219	967	-175	-573	-134	-440	1
WAT	9	42	-5	-28	-12	-16	1

FOR	3	29	-26	0	0	-0	3
MAN	1200	1902	-235	-467	-503	36	2
CON	633	330	74	230	374	-145	3
CRA	23	77	-38	-16	-19	3	2
TRC	347	354	50	-57	-75	18	2
TRD	1125	861	314	-50	-56	6	2
TOU	15	111	-12	-85	-132	48	2
HSN	10	26	-7	-9	-11	3	2
OTHER	124	115	-60	69	104	-35	3
1970-1975							
TOT	7114	6552	50	511	473	38	-
AGR	1101	1123	-114	92	24	68	4
WAT	47	48	-4	3	1	2	4
FOR	12	32	-20	-0	-1	0	2
MAN	3645	2492	642	512	554	-43	3
CON	355	589	-265	31	40	-10	3
CRA	128	91	37	-0	-0	0	2
TRC	402	509	-72	-36	-46	10	2
TRD	1157	1342	-95	-90	-96	6	2
TOU	64	125	-56	-5	-9	4	2
HSN	7	32	-18	-7	-9	2	2
OTHER	196	170	16	11	13	-2	3
1975-1979							
TOT	7421	7926	-108	-398	173	-571	-
AGR	461	1321	-196	-663	-173	-490	1
WAT	64	57	-3	11	5	6	4
FOR	4	32	-23	-4	-13	9	2
MAN	3418	3313	160	-55	-58	3	2
CON	1065	622	242	201	266	-65	3
CRA	128	120	-22	31	37	-6	3
TRC	339	568	-141	-88	-118	30	2
TRD	1502	1528	-203	177	196	-19	3
TOU	154	129	-32	57	108	-51	3
HSN	30	30	-4	4	6	-2	3
OTHER	255	209	114	-68	-84	15	2

1979–1983							
TOT	2372	842	554	976	1264	-288	-
AGR	413	120	605	-312	-92	-220	1
WAT	-6	6	10	-22	-10	-12	1
FOR	-2	3	6	-10	-31	21	2
MAN	1987	360	1037	590	615	-25	3
CON	-527	79	-854	249	303	-54	3
CRA	-9	13	47	-69	-77	7	2
TRC	-39	55	16	-110	-152	42	2
TRD	527	164	-344	707	750	-43	3
TOU	77	15	19	44	73	-30	3
HSN	14	3	7	4	6	-2	3
OTHER	-63	24	7	-94	-121	27	2
1983–1990							
TOT	-2620	-1991	565	-1194	-1231	38	-
AGR	277	-288	850	-285	-93	-192	1
WAT	-25	-14	-5	-7	-4	-3	1
FOR	25	-6	-8	39	134	-95	3
MAN	346	-907	1083	171	179	-8	2
CON	-1207	-143	-530	-534	-611	77	2
CRA	-153	-28	-102	-23	-30	7	3
TRC	-188	-120	323	-392	-596	205	2
TRD	-1396	-392	-902	-102	-102	-0	1
TOU	-293	-36	-146	-111	-182	71	2
HSN	24	-8	3	29	41	-12	3
OTHER	-30	-49	-3	21	32	-11	2

Chapter I

COMPONENTS OF CHANGE IN THE TOTAL VALUE OF GROSS DOMESTIC PRODUCT BY REGION

*T*he slower or faster growth of GDP in the republics and provinces (in relation to the Yugoslav average) led to proportional changes in the share of regions in Yugoslavia's total GDP (*Table 1.42*). The share of Bosnia and Herzegovina in Yugoslav GDP followed a downward trend (by 1970), only to rise later. Montenegro's share fluctuated, while Croatia's share was stable until 1970, after which its decline began. In Macedonia, Slovenia and Serbia as a whole (as well as in some of Serbia's parts), share was more or less constant.

To the changes in the regional shares of the value of Yugoslav GDP, in addition to the initial levels of the value of GDP in the region, the total (absolute and relative) changes in the value of GDP in Yugoslavia in the given sub-period, also contributed the share of each region in the absolute change of Yugoslav GDP (*Table 1.43*). In almost all regions share oscillated throughout the various sub-periods (especially after 1979), so that no direct correspondence could be immediately observed in the share of regions in the absolute change in certain sub-periods and in global GDP in the initial (and final) years of a given sub-period.

Table 1.42 REPUBLICS AND PROVINCES: SHARE IN GDP

REGION	1952	1960	1965	1970	1975	1979	1983
YUG	100.0	100.0	100.0	100.0	100.0	100.0	100.0
BIH	15.8	13.3	12.8	11.9	12.0	12.0	12.5
MNO	2.2	1.6	2.0	2.0	1.8	1.8	2.1
CRO	27.1	27.6	27.0	27.2	26.6	26.3	25.4
MAK	5.4	4.4	5.0	5.5	5.5	5.7	5.7
SLO	16.5	17.5	17.1	17.7	18.4	17.9	17.7
SRB	33.1	35.6	36.1	35.7	35.8	36.3	36.7
CES	23.1	24.0	23.7	23.9	23.6	24.4	24.3
KIM	1.8	1.4	1.8	1.8	1.9	1.8	1.8
VOJ	8.2	10.2	10.6	10.0	10.2	10.1	10.5

Table 1.43 REPUBLICS AND PROVINCES:
SHARE IN ABSOLUTE CHANGE IN GDP

REGION	1952-60	1960-65	1965-70	1970-75	1975-79	1979-83	1983-90*
YUG	100.0	100.0	100.0	100.0	100.0	100.0	100.0
BIH	10.9	12.1	9.2	12.3	12.2	30.2	11.3
MNO	1.1	2.7	2.1	1.2	1.6	13.1	1.5
CRO	28.2	25.8	27.9	24.8	25.5	-9.5	32.0
MAK	3.4	6.2	6.8	5.5	6.4	6.3	5.3
SLO	18.4	16.3	19.6	20.1	16.4	9.7	8.8
SRB	38.0	37.0	34.4	36.1	37.9	50.3	41.1
CES	25.0	23.1	24.4	22.8	27.0	18.9	34.9
KIM	1.1	2.4	1.8	2.4	1.4	3.0	5.1
VOJ	12.0	11.5	8.2	10.9	9.6	28.4	1.1

*The shift is negative (meaning an absolute drop) in all regions except central Serbia

In addition to the already listed factors that influenced the share of regions in global GDP, the reason for this lies in the different intensities and directions of change inside a given sub-period. In this sense the two “final” sub-periods in which the crisis of the Yugoslav economy and society fully manifested themselves stand out in particular. The crisis had a crucial impact on global GDP, but it did not affect all the regions in the same way.

From the point of view of the shift-share analysis, the issue of variations in regional GDP growth rates translates into elements that affected the regional GDP growth rate positively or negatively. In other words, the question is: faster (slower) growth is the result of a more (un)favorable structure and/or regional “particularities?” Table 1.44 offers data on how structural and differential shifts influenced the growth of GDP. The values are given in both absolute (Δ) and relative(r) terms for all regions (in the seven observed sub-periods).

For example, from 1952 to 1960 GDP in *Bosnia and Herzegovina* went up by 48458 million dinars (or 74.1% relative to the initial year). Had GDP in this republic in the given sub-period grown at the average Yugoslav rate, its increment would have amounted to 7043 million dinars, i.e. its rate would have been 107.4%. The fact that real change was smaller than regional share owes to the negative structural shift amounting to 1249 million dinars (or -19.0%), while comparative regional “flaws” generated a negative differential shift of 936 million dinars (or -14.3%). The sum of the two negative shifts is -2186 million dinars (or 33.3%), which is exactly how GDP’s real change was smaller than regional share (7043-2186=4858, or, in relative terms, 107.4%-33.3%=74.1%).

In the case of *Bosnia and Herzegovina* the structural shift was negative until 1979, and constantly showed a downward tendency, only to become positive in

the two final sub-periods. The differential shift was negative in the first three and the final sub-period and positive in all of the others, which resulted in a negative total shift in most of the sub-periods (four out of seven). Furthermore, in all of the sub-periods the value (positive or negative) and magnitude of the differential shift influenced the direction of change in the total shift.

The positive (or negative) total shift of a region in a sub-period was the result of the number and absolute value of the positive (or negative) total sectoral shifts. *Table 1.45* shows the number of sectors with a positive total shift. Owing to the absolute value of the positive, i.e. negative total sectoral shifts, there is no firm correlation between the number of sectors and the positive shift and positive regional shifts. Still, the data in the table is of indicative relevance.

In almost all sub-periods (with the exception of 1965-1970), *Montenegro* had a negative structural shift. In three sub-periods the differential shift was positive, while in the other four it was negative. Much like in Bosnia and Herzegovina, the sign (plus or minus) in front of the differential shift determined the sign of the total shift in all sub-periods.

In five sub-periods *Croatia* saw a negative total shift, which was the result of both the structural and differential shifts being negative. The positive total shift in the initial sub-period was due to both shifts being positive, in the so-called reform sub-period (1965-1970) from a positive differential and zero structural shift, and, in the final sub-period, from a positive differential shift that exceeded the negative structural shift.

In *Macedonia* the total shift was negative in the initial and final sub-period and positive in all of the others. Both the negative and the positive total shifts were the result of a different combination of signs before and the magnitude of the structural and differential shifts.

In the initial sub-period in *Slovenia* the positive structural shift exceeded the negative differential shift by far, resulting in the shift total being positive. The total shift was positive from 1965-1975: in the first sub-period (1965-1970) as a consequence of the positive differential shift exceeding the negative structural shift, and in the second (1970-1975) owing to the convergent positive effect of both shifts. In all other sub-periods in which the total shift was negative, it was caused by the positive or negative value and magnitude of the differential shift.

In *Serbia*, a positive or negative value and magnitude of the differential shift defined the positive or negative value of the total shift in all sub-periods.

Table 1.44 COMPONENTS OF GDP GROWTH BY REGION

Period	Real change		Proportional share		Structural shift		Differential shift		Total shift	
	Δ	r	Δ	r	Δ	r	Δ	r	Δ	r
Bosnia and Herzegovina										
52-60	4858	74.1	7043	107.4	-1249	-19.0	-936	-14.3	-2186	-33.3
60-65	5593	49.0	6156	53.9	-157	-1.4	-406	-3.6	-563	-4.9
65-70	4153	24.4	5811	34.2	-121	-0.7	-1537	-9.0	-1658	-9.7
70-75	8022	37.9	7793	36.8	-6	-0.0	234	1.1	229	1.1
75-79	9423	32.3	9288	31.8	-29	-0.1	164	0.6	135	0.5
79-83	2526	6.5	1006	2.6	102	0.3	1418	3.7	1520	3.9
83-90	1659	4.0	1837	4.5	317	0.8	-495	-1.2	-178	-0.4
Montenegro										
52-60	502	55.6	970	107.4	-292	-32.3	-176	-19.5	-468	-51.8
60-65	1259	89.5	758	53.9	-111	-7.9	612	43.5	501	35.6
65-70	970	36.4	910	34.2	0	0.0	60	2.2	60	2.2
70-75	801	22.0	1339	36.8	-109	-3.0	-428	-11.8	-537	-14.8
75-79	1261	28.4	1412	31.8	-40	-0.9	-111	-2.5	-151	-3.4
79-83	1092	19.2	148	2.6	-73	-1.3	1017	17.9	944	16.6
83-90	220	3.2	303	4.5	-31	-0.5	-52	-0.8	-83	-1.2
Croatia										
52-60	12546	111.6	12069	107.4	469	4.2	8	0.1	477	4.2
60-65	11961	50.3	12825	53.9	-496	-2.1	-368	-1.5	-864	-3.6
65-70	12642	35.4	12212	34.2	8	0.0	422	1.2	429	1.2
70-75	16209	33.5	17819	36.8	-242	-0.5	-1368	-2.8	-1609	-3.3
75-79	19727	30.5	20557	31.8	-236	-0.4	-595	-0.9	-830	-1.3
79-83	-796	-0.9	2197	2.6	-216	-0.3	-2778	-3.3	-2993	-3.5
83-90	4698	5.6	3730	4.5	-382	-0.5	1350	1.6	968	1.2
Macedonia										
52-60	1521	68.4	2388	107.4	-146	-6.6	-721	-32.4	-867	-39.0
60-65	2884	77.0	2019	53.9	-17	-0.4	882	23.6	865	23.1
65-70	3059	46.1	2264	34.2	35	0.5	759	11.5	794	12.0
70-75	3599	37.1	3567	36.8	11	0.1	21	0.2	32	0.3
75-79	4940	37.2	4228	31.8	-4	-0.0	716	5.4	712	5.4
79-83	522	2.9	475	2.6	135	0.7	-88	-0.5	47	0.3
83-90	785	4.2	837	4.5	73	0.4	-126	-0.7	-52	-0.3
Slovenia										
52-60	8183	119.4	7359	107.4	860	12.5	-36	-0.5	824	12.0
60-65	7556	50.2	8107	53.9	125	0.8	-677	-4.5	-552	-3.7

65-70	8875	39.3	7718	34.2	-12	-0.1	1170	5.2	1158	5.1
70-75	13161	41.8	11587	36.8	415	1.3	1158	3.7	1574	5.0
75-79	12702	28.5	14202	31.8	139	0.3	-1640	-3.7	-1501	-3.4
79-83	807	1.4	1494	2.6	152	0.3	-839	-1.5	-687	-1.2
83-90	1293	2.2	2596	4.5	253	0.4	-1556	-2.7	-1303	-2.2
Serbia										
52-60	16955	123.5	14734	107.4	358	2.6	1862	13.6	2220	16.2
60-65	17153	55.9	16541	53.9	-273	-0.9	886	2.9	613	2.0
65-70	15556	32.5	16340	34.2	91	0.2	-874	-1.8	-783	-1.6
70-75	23654	37.3	23341	36.8	-69	-0.1	382	0.6	313	0.5
75-79	29335	33.7	27700	31.8	170	0.2	1465	1.7	1635	1.9
79-83	4201	3.6	3032	2.6	-100	-0.1	1269	1.1	1169	1.0
83-90	6034	5.0	5385	4.5	-230	-0.2	879	0.7	649	0.5
Central Serbia										
52-60	11123	116.2	10281	107.4	210	2.2	632	6.6	842	8.8
60-65	10707	51.7	11160	53.9	-49	-0.2	-405	-2.0	-453	-2.2
65-70	11040	35.2	10728	34.2	222	0.7	89	0.3	312	1.0
70-75	14948	35.2	15630	36.8	-135	-0.3	-546	-1.3	-681	-1.6
75-79	20859	36.3	18265	31.8	225	0.4	2370	4.1	2595	4.5
79-83	1577	2.0	2039	2.6	-639	-0.8	176	0.2	-462	-0.6
83-90	5127	6.4	3565	4.5	-401	-0.5	1963	2.5	1562	2.0
Kosovo and Metohia										
52-60	499	68.0	788	107.4	49	6.6	-338	-46.0	-289	-39.4
60-65	1107	89.8	664	53	95	0.4	437	35.5	442	35.9
65-70	809	34.6	799	34.2	-13	-0.6	23	1.0	10	0.4
70-75	1592	50.6	1159	36.8	16	0.5	417	13.3	433	13.8
75-79	1055	22.3	1509	31.8	53	1.1	-506	-10.7	-454	-9.6
79-83	253	4.4	151	2.6	-15	-0.3	117	2.0	102	1.8
83-90	749	12.4	270	4.5	2	0.0	477	7.9	479	7.9
Vojvodina										
52-60	5333	156.2	3665	107.4	100	2.9	1568	45.9	1668	48.8
60-65	5340	61.0	4716	53.9	-229	-2.6	853	9.8	624	7.1
65-70	3707	26.3	4812	34.2	-118	-0.8	-986	-7.0	-1105	-7.8
70-75	7114	40.0	6552	36.8	50	0.3	511	2.9	561	3.2
75-79	7421	29.8	7926	31.8	-108	-0.4	-398	-1.6	-506	-2.0
79-83	2372	7.3	842	2.6	554	1.7	976	3.0	1530	4.7
83-90	158	0.5	1550	4.5	169	0.5	-1561	-4.5	-1392	-4.0

Table 1.45 GDP: NUMBER OF SECTORS WITH A POSITIVE TOTAL SHIFT

PERIOD	BIH	MNO	CRO	MAK	SLO	SRB	CES	KIM	VOJ
1952-1960	5	4	6	5	5	6	5	1	8
1960-1965	3	5	3	4	3	2	2	7	3
1965-1970	1	4	6	6	4	3	3	5	3
1970-1975	6	3	3	6	6	1	1	6	3
1975-1979	4	2	3	7	3	6	5	3	6
1979-1983	9	9	5	5	6	6	6	8	5
1983-1990	2	5	6	5	3	6	6	4	5

Something similar happened in *central Serbia*, except for the 1979-1983 sub-period, when the negative structural shift crucially influenced the total shift.

Much like in Serbia as a whole, in Kosovo and Metohia, too, the character and magnitude of the differential shift influenced the total shift in all of the sub-periods.

Also, in *Vojvodina* the characteristics of the differential shift determined the character of the total shift.

Table 1.46 GDP: RELATIONS BETWEEN REAL CHANGE (F)
AND PROPORTIONAL SHARE (P)

РЕГИОН	1952-1960.	1960-1965.	1965-1970.	1970-1975.	1975-1979.	1979-1983.	1983-1990.
BIH	F<P	F<P	F<P	F>P	F>P	F>P	F<P
MNO	F<P	F>P	F>P	F<P	F<P	F>P	F<P
CRO	F>P	F<P	F>P	F<P	F<P	F<P	F<P
MAK	F<P	F>P	F>P	F>P	F>P	F>P	F<P
SLO	F>P	F<P	F>P	F>P	F<P	F<P	F<P
SRB	F<P	F>P	F>P	F<P	F<P	F>P	F>P
CES	F>P	F<P	F>P	F<P	F>P	F<P	F>P
KIM	F<P	F>P	F>P	F>P	F<P	F>P	F>P
VOJ	F>P	F>P	F<P	F>P	F<P	F>P	F<P

Real change exceeding hypothetical change in a region was the result of a positive total shift. As opposed to that, a negative total shift resulted in GDP growth being smaller than proportional share. In this sense an overview of the ratio between real and hypothetical change in GDP given by sub-periods in *Table 1.46* is informative.

Chapter J

GROSS DOMESTIC PRODUCT: BOUDEVILLE'S MODIFIED TYPOLOGY OF REGIONS

Here, the change in GDP is an indicator of the (lack of) success of a region. Which region and when (in what sub-period) was successful or unsuccessful is determined based on the objectivized criteria of a region's success as defined by Boudeville¹⁹.

Table 1.47 shows that in three sub-periods *Bosnia and Herzegovina* was characterized by successful growth (in two – 1970–1975 and 1975–1979, of Type 4, and in one – 1979–1983, of Type 2), whereas in other sub-periods, according to Boudeville's modified criteria, the republic's growth was unsuccessful (Type 8 in the 1952–1960 sub-period; Type 7 in the 1965–1975 decade, and Type 6 in the 1983–1990 sub-period).

Table 1.47 GDP: BOUDEVILLE'S MODIFIED TYPOLOGY OF REGIONS

PERIOD	BIH	MNO	CRO	MAK	SLO	SRB	CES	KIM	VOJ
1952-1960	8	8	1	7	3	2	2	5	2
1960-1965	7	4	8	4	5	4	7	2	4
1965-1970	7	2	2	2	4	5	1	4	7
1970-1975	4	7	7	2	2	4	7	2	2
1975-1979	4	7	7	4	5	2	2	5	7
1979-1983	2	4	7	3	5	4	6	4	2
1983-1990	5	7	4	5	5	4	4	2	5

Montenegro also had a successful growth rate in three sub-periods: in two (1960–1965 and 1979–1983) its GDP growth was Type 4, while in the 1965–1970 sub-period it was Type 2. In the initial sub-period, the republic's growth was unsuccessful, i.e. Type 8, while in the final and other sub-periods it was Type 7.

In *Croatia*, there were three successful sub-periods – the initial one (Type 1), the third (1965–1970 – Type 4) and final (Type 4), while the others were unsuccessful: Type 8 characterized the 1960–1965 sub-period, Type 7 the 1970–1983 period, while the final sub-period was Type 8.

Macedonia registered only one unsuccessful sub-period (the initial one, which was Type 7), while all of the others saw successful growth: Type 2 characterized

19 Table 1.2

the period from 1965 to 1975, Type 3 the period from 1979–1990, and Type 4 the 1960–1965 and 1975–1979 sub-periods.

Slovenia had successful GDP growth in the initial sub-period (Type 3 from 1952–1960) and from 1965–1975 (initially Type 4, followed by Type 2), while it was unsuccessful (types 5 and 6) in the other sub-periods.

Serbia was successful in six sub-periods (1952–1960, 1975–1979 and 1983–1990 were Type 2, while the sub-periods from 1970–1975 and 1979–1983 were Type 4) and unsuccessful only in one sub-period (Type 5, in 1965–1975).

Central Serbia was characterized by as many as five different types – four unsuccessful (Type 7 from 1960–1965 and 1970–1975, and Type 6 in 1979–1983, and 1983–1990) while four sub-periods were successful (Type 1 from 1965–1970, Type 2 from 1952–1960 and 1975–1979, and Type 4 from 1983–1988).

In two sub-periods in *Kosovo and Metohia* (1952–1960 and 1975–1980) GDP growth was of Type 5, while the other sub-periods were Type 2 successful growth periods (1960–1965, 1970–1975) and Type 4 (1965–1970 and 1979–1983). The final sub-period was Type 6.

Three Type 2 sub-periods in *Vojvodina* were successful (1952–1960, 1970–1975 and 1979–1983). Its GDP growth was also successful in the 1960–1965 sub-period (Type 4), while in three sub-periods the province was unsuccessful (Type 7 from 1965–1970 and 1975–1980, and Type 6 from 1983–1990).

* * *

In conditions of “organic growth,” i.e. the predominance of the market as the basic factor in coordinating economic activities, GDP can be considered as a (general) indicator of growth, structural changes, and the successfulness or unsuccessfulness of an economy (of a country, region, sector).

In conditions in which the market is suppressed by various forms of non-market coordination and free entrepreneurship by normative directives or normed agreements between economic “subjects”, there can be no mention of spontaneous (“organic”) growth. For this reason, the speed of GDP growth cannot be considered an unquestionable indicator of the successfulness of the economies of the Yugoslav regions.

This means that the results of the shift-share analysis and this indicator cannot be interpreted outside a specific, Yugoslav institutional context.

Chapter K

PART ONE: CONCLUSIONS

The results of analyzing the components of regional employment shifts, fixed assets and GDP as a whole, and particularly the results of Boudeville's modified typology of regions, clearly lead to the following conclusions:

1. The degree of development and successfulness of a region²⁰ are negatively correlated;

2. The differential shift crucially influences the successfulness of a region, meaning that regional particularities have a decisive influence on the differences in the successfulness of various regions;

3. The structure of a region is not an important factor in creating differences in the successfulness of regions, leading to the conclusion that the structures of regions do not differ significantly among themselves, i.e. that these differences are not big enough to impact the differences in the successfulness of regions in any major way.

To ensure that these conclusions are readily noticeable, the regions are ranked according to successfulness measured by Boudeville's modified typology of regions for all three indicators: employment, fixed assets and GDP. The criterion of successfulness was the number of successful, i.e. unsuccessful sub-periods. The results are given in *Tables 1.48, 1.49 and 1.50*. In addition to the abbreviations for the regions, the types that characterize them in successful sub-periods are given in parentheses.

The ranking shows that the observed interdependencies are the most prominent in the case of employment, lesser in the case of fixed assets, and the least noticeable when it comes to GDP. At the same time, the differences between the most successful and the most unsuccessful regions are the most apparent in the case of employment (the best regions had no unsuccessful sub-periods, while the worst regions were successful in only one sub-period).

The ranking of regions by successfulness in employment growth resulted in the largest number of groups – 6. The differences between the regions were lesser where it came to fixed assets resulting in a smaller number of groups – 4, like the difference between the most and the least successful (the best regions have one unsuccessful sub-period each and the worst two successful sub-periods each). The

²⁰ The terms *successfulness*, or unsuccessfulness of a region should be understood conditionally. They do not involve a global evaluation of a region's successfulness, but the implementation of an objectivized, quantitative criterion, which, simply put, boils down to *the ratio between the speed of growth of indicators in a region and at the global level*. Since, however, this criterion was consistently applied to all regions and all indicators (shifts in employment, fixed assets and GDP), regions can be compared from the viewpoint of successfulness defined as such.

least difference was in GDP: the regions formed only three groups, in which two regions were the best, with two unsuccessful sub-periods each, and four were in the group of least successful, having three successful sub-periods each.

Table 1.48 REGIONS BY SUCCESSFULNESS BASED ON EMPLOYMENT

	Regions	Number of sub-periods	
		Successful	Unsuccessful
1.	MON (2; 4), KIM (4)	7	0
2.	MAC (4)	6	1
3.	CES(2; 4)	4	3
4.	BIH (4)	3	4
5.	VOJ (4)	2	5
6.	CRO (3), SLO (3)	1	6

Table 1.49 REGIONS BY SUCCESSFULNESS BASED ON FIX ASSETS

	Regions	Number of sub-periods	
		Successful	Unsuccessful
1.	MNO(2; 4)	6	1
2.	MNO (2; 4), KIM (2; 4)	5	2
3.	BIH (2,4)	4	3
4.	SLO (2), CRO (1; 4), Voj (2; 3), CES (2; 4)	2	5

Table 1.50 GROSS DOMESTIC PRODUCT:
REGIONS RANKED BY SUCCESSFULNESS

	Regions	Number of sub-periods	
		Successful	Unsuccessful
1.	MAK (2; 3, 4), KIM (2; 4)	5	2
2.	CES (1; 2, 4), Voj (2; 4)	4	3
3.	CRO (1; 2; 4), SLO (2; 3; 4) BIH (2; 4), MNO (2; 4)	3	4

The existence of a relatively firm connection between a region's successfulness and the degree of its development in terms of employment and fixed assets – the less a region was developed the growth of these two indicators was faster – suggests that regional policies exerted a strong influence on the growth of production factors in underdeveloped regions but also that regional policies mostly focused on them. When the importance of employment for maintaining social peace is taken into account – which was one of the main goals of the regional elites – it becomes clear why this connection is the most apparent precisely in the case of employment.

This connection is not as pronounced in the ranking of regions by successfulness based on GDP trends. Thus, although on the one hand, the least developed regions – Kosovo and Metohia and Macedonia – ranked as the most successful, and, on the other, the most developed, Slovenia and Croatia, ranked as the least successful, Bosnia and Herzegovina and Montenegro, however, were actually the least successful regions and central Serbia and Vojvodina among the more successful regions.

This is to say that the growth of GDP is not directly conditioned on the growth of production factors, and that it is determined, to a good degree, by their utilization, which (federal) regional policy had no influence on whatsoever.

* * *

In the standard shift-share analysis the “success” of a region is measured by the growth rate of an indicator (employment, fixed assets, GDP). Such an approach undoubtedly has its advantages, but additional useful information can be obtained by measuring successfulness through having a result (numerator) relativized by a denominator that stands for an “expense” (cost). For that reason in the second part of this treatise regional differences expressed in “classical” efficiency measures (labor productivity and production coefficient) will be examined through the application of a modified shift-share analysis.

Part Two

REGIONAL DIFFERENCES IN EFFICIENCY

Chapter L

REGIONAL AND SECTORAL ANALYSIS OF EFFICIENCY FACTORS: SHISHA MODIFIED

Two indicators were applied in examining the differences in efficiency of Yugoslavia's regional economies – labor productivity and the production coefficient. Labor productivity is defined as the ratio between the value of GDP and the number of employed workers, while the production coefficient is the ratio between the value of GDP and the purchasing value of fixed assets. Both indicators may be interpreted as the average individual contribution of one of the factors (labor or capital) to GDP.

In order to be able to tell apart the influence of a region's sectoral structure from the influence of regional differences in efficiency (of labor and capital) on the region's global efficiency, a special standardization procedure was applied to the sectoral and regional values of these indicators for every year of the surveyed period (1965-1990).

The basic idea behind the procedure was taken from the shift-share analysis concept, modified in a way so as to enable the quantification of the contribution of regional differences in efficiency, stemming from the regional sectoral structure, to GDP, as well as the contribution to GDP of the differences in a sector's efficiency in a given region, and the average Yugoslav efficiency in the corresponding sector.

The modification in question differs from the shift-share analysis concept in the following:

1. In the event of the efficiency factors' decomposition, the level of GDP is considered the result of the efficiency of a particular production factor.

2. Since efficiency is always defined as the ratio between the result (GDP) and the factors involved (labor or fixed assets), the influence of the structural and differential efficiency components is measured indirectly – through the result (GDP).

In other words, GDP of each sector is presented as the sum of the hypothetical value that would have been achieved had the given region's efficiency been equal to Yugoslavia's average, and the net effect of the two shifts – structural and differential.

Before embarking on the standardization procedure, the values that will be used in the analysis have to be defined. If:

Y_{ij} – is GDP in sector i in region j ;

z_{ij} – employment in sector i of region j ;

κ_{ij} – is the purchasing value of fixed assets in sector i of j ;

π_{ij} – is productivity in sector i of region j ;

ε_{ij} – is the production coefficient in sector i of region j

And if:

$$\pi_{ij} = Y_{ij} / z_{ij}, \quad (2.1)$$

$$\varepsilon_{ij} = Y_{ij} / \kappa_{ij}. \quad (2.2)$$

Then GDP is

$$Y_{ij} = \pi_{ij} z_{ij}, \text{ that is,} \quad (2.3)$$

$$Y_{ij} = \varepsilon_{ij} \kappa_{ij}. \quad (2.4)$$

The addition produces the following definitional equations:

$$Y_j = \sum_i Y_{ij} = \sum_i z_{ij} \pi_{ij}, \text{ that is} \quad (2.5)$$

$$Y_j = \sum_i Y_{ij} = \sum_i \kappa_{ij} \varepsilon_{ij}; \quad (2.6)$$

$$Y_i = \sum_j Y_{ij} = \sum_j z_{ij} \pi_{ij}, \text{ that is} \quad (2.7)$$

$$Y_i = \sum_j Y_{ij} = \sum_j \kappa_{ij} \varepsilon_{ij}; \quad (2.8)$$

$$Y = \sum_i \sum_j Y_{ij} = \sum_i \sum_j z_{ij} \pi_{ij}, \text{ that is} \quad (2.9)$$

$$Y = \sum_i \sum_j Y_{ij} = \sum_i \sum_j \kappa_{ij} \varepsilon_{ij}.$$

It is clear that Y_j represents the GDP of region j , Y_i the GDP of sector i at the level of Yugoslav economy, and Y – Yugoslavia's total GDP. By analogy, Z_j is the total employment in the region j , Z_i is the total employment in sector i at the level of the Yugoslav economy, Z is total employment in the Yugoslav economy; K_j is the purchasing value of fixed assets in region j , K_i the purchasing value of fixed assets in sector i , and K the purchasing value of the Yugoslav economy's fixed assets. According to the definition:

$$\Pi_j = Y_j / Z_j, \text{ that is} \quad (2.11)$$

$$E_j = Y_j / K_j; \quad (2.12)$$

$$\Pi_i = Y_i / Z_i, \text{ that is} \quad (2.13)$$

$$E_i = Y_i / K_i; \quad (2.14)$$

$$\Pi = Y / Z, \text{ that is} \quad (2.15)$$

$$E = Y / K. \quad (2.16)$$

The standardization procedure will be performed and the defined values interpreted on the example of labor productivity. The corresponding equations for the production coefficient will be obtained by simply replacing the coefficient π_{ij} with the coefficient ε_{ij} , and the employment symbols with the symbols for fixed assets (that is z_{ij} , Z_j , Z_i and Z are replaced by κ_{ij} , K_j , K_i , and K), with an analogous interpretation of the obtained values.

A region's GDP is defined in the following manner,

$$Y_j = P_j + (S_j + D_j) \text{ or} \quad (2.17)$$

$$Y_j - P_j = S_j + D_j; \quad (2.18)$$

where in

$$P_j = \sum_i p_{ij} = \sum_i z_{ij} = \Pi \sum_i z_{ij} = \Pi Z_j \quad (2.19)$$

$$S_j = \sum_i s_{ij} = \sum_i z_{ij} (\Pi_i - \Pi) \quad (2.20)$$

$$D_j = \sum_i d_{ij} = \sum_i z_{ij} (\pi_{ij} - P_i) \quad (2.21)$$

$$D_j' = \sum_i d_{ij}' = \sum_i Z_j (Z_i / Z) (\pi_{ij} - P_i) \quad (2.22)$$

$$D_j'' = \sum_i d_{ij}'' = \sum_i (z_{ij} / Z_j - Z_i / Z) Z_j (\pi_{ij} - P_i) \quad (2.23)$$

and where in

P_j stands for the proportional regional GDP that would have been achieved if labor productivity in region j were equal to the average labor productivity in Yugoslavia; it is equal to the product of regional employment and average labor productivity.

S_j stands for structural shift whose (positive or negative) value shows whether sectors with above or below average labor productivity feature prominently in a given region. In other words, in regions with positive structural shifts, employment is concentrated in sectors with above-average labor productivity, and the value of S_j represents the portion of GDP that is achieved owing to such favorable sectoral structures. In regions where the structural shift is negative, sectors with below-average labor productivity predominate in the employment structure, and in these the value of S_j represents the portion of GDP which is consequently lost.

D_j stands for differential shift whose (positive or negative) value shows whether labor productivity in a given region's sectors is below or above the average labor productivity in corresponding sectors at the level of Yugoslavia. This shift actually represents a gain or loss in GDP of a given region, which is the result of higher or lower labor productivity in the region's sectors relative to the average Yugoslav sectoral labor productivity.

D_j' stands for net differential shift. It can be positive or negative and it represents the effect of labor productivity in a region's sectors, on the condition that the region has an average sectoral employment structure. In this way, the influences of the regional employment structure's specificities are excluded from the differential shift.

D_j'' stands for allocation effect which shows whether employment in a region is located in sectors with above or below average labor productivity, that is, whether a region, in view of employment, is specialized in productive or unproductive sectors. Much like in the case of the shift-share analysis, here, too, the plus/minus sign before the allocation effect depends on the sign before two factors: the one that stands before the difference between the share of sector i in region j 's employment

and the corresponding share at the level of Yugoslavia ($z_{ij}/Z_j - Z_i/Z$), and the sign before the difference between labor productivity in sector i of region j , and the same sector at the level of Yugoslavia ($\pi_{ij} - P_i$).

The four possible types of allocation effect pertaining to the specialization of region j in sector i and the concurrent efficiency (labor productivity or production coefficient) of sector i in region j relative to the efficiency of that sector at the level of Yugoslavia are represented in *Table 2.1*.

Table 2.1 EFFICIENCY: TYPES OF ALLOCATION EFFECT

Type	Description	Components		
		D''_{ij}	Specialization	Efficiency
			$(z_{ij}/Z_j - Z_i/Z)$	$(\pi_{ij} - P_i)$
1	Inefficient, specialized	-	+	-
2	Inefficient, non-specialized	+	-	-
3	Efficient, non-specialized	-	-	+
4	Efficient, specialized	+	+	+

The types of allocation effect are ranked in such a way that Type 1 marks the worst situation (a region's specialization in an inefficient sector) and Type 4 the most favorable (a region's specialization in an efficient sector).

The sum of the regional values of the structural and differential shifts represents the net influence of the region's efficiency on GDP size. If the sum is positive, the region's GDP is bigger than the hypothetical value, that is, the one that the region would have with average efficiency, and vice versa. According to the plus/minus sign, magnitude, the convergent effect of and mutual ratio between the structural and differential shifts, the region is classified as one of the eight possible types whose characteristics are systematized in *Table 2.2*.

Table 2.2 EFFICIENCY: TYPES OF REGION BY SIGN AND MAGNITUDE OF STRUCTURAL AND DIFFERENTIAL SHIFT

Type	S_j	D_j	$S_j + D_j$
1	+	+	+, $S_j > D_j$
2	+	+	+, $S_j < D_j$
3	+	-	+
4	-	+	+
5	-	+	-
6	+	-	-
7	-	-	-, $S_j > D_j$
8	-	-	-, $S_j < D_j$

The GDP of a Type 1, 2, 3 and 4 region is higher than hypothetically possible, meaning that the net effect of regional efficiency is positive. From the point of view of efficiency, Type 1 and 2 regions are characterized by favorable structure and above-average efficiency. The GDP of a Type 3 region is higher than proportional owing to the predominance of more efficient sectors, whereas in the case of the Type 4 region, regional efficiency is above-average.

The GDP of a Type 5, 6, 7 and 8 region is smaller than proportional, that is, the net effect of their structural and differential efficiency components is negative. Type 5 regions are characterized by inefficient sectors, that is, an unfavorable structure, whose effects surpass the positive effects of the differential shift. Despite their more efficient sectors i , and, consequently, a positive structural shift, Type 6 regions cannot achieve the proportional part of GDP because the negative effects of their sectors' inefficiency surpass the positive effects of structure. The situation in which Type 7 and 8 regions are where efficiency is concerned is the consequence of the unfavorable structure and regional inefficiency of their sectors.

Hypothetical GDP, the structural and differential shifts, as well as both components of the differential shift are, by definition, stated in absolute amounts (millions of dinars). Since the absolute amounts do not offer a direct and obvious picture of the relationship between the given values, the results are normalized. In this way the relative values of hypothetical GDP and the structural and differential shifts are obtained, which are expressed as percentages of a region's or its sectors' GDP.

The normalization of results necessitates the division of the equation (7.17) with the region's real GDP and its multiplication by 100, to arrive at the following relation:

$$100 = P_j/Y_j \cdot 100 + S_j/Y_j \cdot 100 \quad (2.24)$$

Its further development leads to the following expressions:

$$a) P_j/Y_j \cdot 100 = \Pi Z_j / \Pi_j Z_j = \Pi / \Pi_j, \quad (2.25)$$

which means that the ratio between hypothetical and real GDP is equal to the ratio of the average global productivity and the average labor productivity of a region. In other words, hypothetical GDP is smaller or bigger than real GDP by as many percentage points as the average global labor productivity is above or below the average labor productivity of a region. If hypothetical GDP exceeds real, the region has a smaller GDP because of lower average labor productivity. This "gain" or "loss" is expressed in percentages of real GDP.

$$\begin{aligned} 6) S_j/Y_j \cdot 100 &= (\sum_i z_{ij} (\Pi_i - \Pi) / \Pi_i \sum_i z_{ij}) \cdot 100 = \\ &= (\sum_i z_{ij} \Pi_i / \sum_i z_{ij} \Pi_j) \cdot 100 - (\sum_i z_{ij} \Pi / \sum_i z_{ij} \Pi_j) \cdot 100 \end{aligned} \quad (2.26)$$

This relation (7.26) offers the percentages of GDP achieved or lost owing to an above-average concentration of employment in above- or below-average efficiency sectors (relative structural shift).

$$c) D_{ij}/Y_j \cdot 100 = \sum_i z_{ij} (\pi_{ij} - \Pi_i) = 100 - (\sum_i z_{ij} \Pi_i / \sum_i z_{ij} \pi_{ij}) \cdot 100 \quad (2.27)$$

This relation (2.27) determines the percentage of GDP that is the result of the difference in efficiency of a region's sectors and sectors at the global level (relative differential shift).

When the normalization procedure is applied at the level of the region's sectors, the following expressions are obtained:

$$a) p_{ij}/Y_{ij} = \Pi / \pi_{ij}; \quad (2.28)$$

$$b) s_{ij}/Y_{ij} = (\Pi_i - \Pi) / \pi_{ij}; \quad (2.29)$$

$$c) d_{ij}/Y_{ij} = (\pi_{ij} - \Pi_i) / \pi_{ij}. \quad (2.30)$$

Expression (2.28) shows that the ratio between hypothetical and real GDP of a region's sector is equal to the ratio of average global labor productivity and the labor productivity of the region's sector; the expression (2.29) determines the percentage of the sector's GDP that is achieved (or lost) due to the difference between average labor productivity in the economy as a whole (relative sectoral structural shift), while the expression (2.30) identifies the percentage of the region's sector that was achieved (or lost) owing to the difference in the efficiency of the sector at the regional level and that same sector at the global level (relative sectoral differential shift).

To ensure the premises for a proper GDP standardization procedure (that is, for the analyzed indicators to meet the conditions determined by the equations), the GDPs of the regions in the 1965-1990 period are calculated as the sum of GDPs in agriculture, water management, forestry, the manufacturing, construction, artisanship, transport and communication, trade and catering and tourism. In other words, "real" GDP in the analysis does not contain the GDP values of the housing and "other activities" sectors. This redefinition was necessary to make the GDP sectoral structure comparable with the sectoral structure of employment and the value of fixed assets (the sectoral structure of employment does not recognize the "other activities" category, while the sectoral structure of fixed assets has no values for fixed assets in the housing sector).

All values (GDP, employment, and the value of fixed assets) pertain to the socially-owned sector of the economy.

Chapter M

AVERAGE AND SECTORAL LABOR PRODUCTIVITY

The data on GDP and the results of the modified shift-share labor productivity analysis are given in eleven tables for each region. First comes the data on the trends of a *socially-owned* (non-private, “socialized”, socialist) sector’s GDP (in total, and by sector) for the 1965-1990 period, in *In 1972 prices*, and in millions of dinars (for example, for Bosnia and Herzegovina, this is *Table 2.3*). What follows and in the same way is the data on labor productivity (for Bosnia and Herzegovina, this is *Table 2.4*). Next (*Table 2.5* for Bosnia and Herzegovina) trends for hypothetical GDP (that the region would have achieved had all of its sectors and the regional economy as a whole been achieving a labor productivity equal to the one on the level of Yugoslavia) are represented.

Real GDP for every region (and for each of their sectors) is equal to the sum of the value of hypothetical GDP and the structural and differential shifts. Thus, Bosnia and Herzegovina’s real GDP in 1965 amounted to 16534 million dinars (the first line of the first TOT column in *Table 2.4*), while the republic’s hypothetical GDP amounted to 17058 million dinars (the first line of the first column in *Table 2.6*). The difference between hypothetical and real GDP is the result of the sum of all shifts that were negative that year: the structural was -371 million dinars (the first line of the first column in *Table 2.7*) and the differential was -154 million dinars (the first line of the first column in *Table 7.8*). Both negative shifts on the regional level were the result of a minus sign in most sectors (six out of nine) before the structural and/or differential shift. In Bosnia and Herzegovina’s three sectors (water management, the manufacturing and trade) real GDP exceeded hypothetical. The example of water management (WAT, the first line of the third column in *Table 2.3*, and the first line of the third column in *Table 2.5*) shows that this was the consequence of a positive structural shift (in the amount of three million dinars – the first line of the third column in *Table 2.7*). The sum of both shifts amounts to ten million dinars, which is by how much real GDP (which amounted to 40 million dinars – the first line of the third column in *Table 7.3*) surpassed the hypothetical GDP of the Bosnia and Herzegovina economy in 1965 (which amounted to 30 million dinars – the first line of the third column in *Table 7.5*). Seven million dinars, which is the amount of the total differential shift of the water management sector in Bosnia and Herzegovina in 1965, is the result of a net differential shift of 14 million dinars (the first line of the third column in *Table 2.11*) and the allocation effect of minus seven million dinars (the first line of the third column in *Table 2.12*).

In this way the standardized data for regions and their sectors, when given in absolute expression,²¹ may be read. In the relative expression, all of the data is provided in the tables with the following titles: RATIO OF REAL AND HYPOTHETICAL GDP (for Bosnia and Herzegovina, for example, this is Table 2.8), RATIO OF STRUCTURAL SHIFT AND REAL GDP (for Bosnia and Herzegovina this is Table 2.9), and RATIO OF DIFFERENTIAL SHIFT AND REAL GDP (for Bosnia and Herzegovina this is Table 2.10).

The 103.2 index, in the first line of the first column in *Table 2.8*, shows that Bosnia and Herzegovina's hypothetical GDP is 3.2% higher than real GDP. If that difference is decomposed, it becomes clear that the structural shift of -2.2% (the first line of the first column of *Table 2.9*) and a differential shift of -0.9% (the first line of the first column of *Table 2.10*) contributed to this result. The 74.00 index (the first line of the third column of *Table 2.8*) for the already mentioned water management sector means that this sector's real GDP in 1965 was 26% higher than hypothetical. That year, the water management sector owed this to a positive structural shift (of 6.3%, as shown in the first line of the third column in *Table 2.9*) and a positive differential shift (of 17.7%, as shown in the first line of the third column in *Table 2.10*).

At the end, a typology of allocation effects for all sectors of a given region (for example, Bosnia and Herzegovina in *Table 2.13*) is presented.

Bosnia and Herzegovina

Table 2.3 shows Bosnia and Herzegovina's GDP which in this work is defined as the sum of the selected sectors' GDPs, while *Table 2.4* shows average and sectoral labor productivity in the 1965-1990 period.

Productivity in Bosnia and Herzegovina in the 1965-1990 period was around 49,000 dinars per employee. Trade (71,000 dinars per employee) stands out with above-average productivity, whereas the artisanship sector (with 22,000 dinars per employee) had the lowest average productivity. The Bosnia and Herzegovina economy achieved its highest productivity in 1979 (61,000 dinars per employee), and lowest in 1965 (42,000 dinars per employee).

The republic's GDP in the entire surveyed period was smaller than hypothetical, i.e. what it would have achieved had its productivity been equal to the average Yugoslav (*Table 2.8*). The least difference between hypothetical and real GDP was in the first year of the surveyed period (in 1965, GDP was 3.2% smaller than hypothetical) and the biggest in the final year (in 1990, average productivity in Bosnia and Herzegovina lagged behind average Yugoslav productivity by 30.5%, which is by how much the republic's GDP was smaller than hypothetical). Although the relative structural and relative differential shifts in all

21 For that reason, there will be no comments for each region.

of the surveyed years were negative, the fact that real GDP was below hypothetical every year was primarily the consequence of Bosnia and Herzegovina's sectoral labor productivity being behind productivity at the level of Yugoslavia. Owing to unfavorable structure, the republic's economy lost between 1.1% and 3% of GDP, although a slight improvement was registered in later years. On the other hand, the negative relative differential shift kept increasing throughout the years: thus, in 1965, as a result of falling behind in sectoral productivity, Bosnia and Herzegovina shed only 0.9% of GDP; in 1988 the loss was over one-quarter of real GDP (*Tables 2.9 and 2.10*).

Table 2.3 BOSNIA AND HERZEGOVINA: GDP OF THE SOCIAL SECTOR

in 1972 prices

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	16534	261	40	722	8055	2197	333	1555	2922	450
1966	17191	372	58	738	8269	2208	321	1617	3144	463
1967	17155	369	57	729	8061	2226	310	1668	3296	441
1968	17982	392	60	715	8475	2335	328	1743	3469	466
1969	19507	399	62	718	9135	2622	353	1905	3808	505
1970	20691	317	49	748	9611	2848	376	2049	4120	574
1971	22526	368	57	761	10651	2702	405	2274	4721	588
1972	23823	419	65	774	11351	2856	432	2287	5058	581
1973	24827	370	57	795	11850	2973	454	2447	5268	613
1974	26951	521	80	832	12932	3104	485	2700	5598	699
1975	28481	517	80	853	13853	3501	583	2700	5646	748
1976	28726	586	90	841	14235	3137	613	2754	5715	756
1977	31410	714	107	916	15663	3438	653	2930	6181	809
1978	34622	746	107	905	17194	4065	701	3222	6822	860
1979	37385	828	111	923	19066	4364	682	3316	7165	930
1980	38260	828	104	896	20306	3864	696	3321	7371	874
1981	39682	886	125	944	21770	3748	720	3500	7119	870
1982	39914	1046	129	963	21736	3737	760	3360	7261	922
1983	39837	1105	129	987	22259	3113	769	3404	7109	962
1984	40856	1137	119	1018	23454	2824	800	3508	7038	958
1985	41985	1026	125	1021	24532	2767	837	3679	7062	936
1986	43283	1146	122	1021	25855	2741	764	3499	7288	847
1987	42555	1072	123	967	25889	2811	717	3261	6938	777
1988	41352	1019	127	939	25670	2359	714	3131	6639	754
1989	41623	1100	127	900	25814	2611	731	3091	6527	722
1990	37234	1048	115	793	23744	2295	625	2520	5412	682

Table 2.4 BOSNIA AND HERZEGOVINA: LABOR PRODUCTIVITY

In million dinars

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	0,042	0,020	0,056	0,025	0,043	0,034	0,019	0,039	0,085	0,040
1966	0,044	0,030	0,080	0,028	0,044	0,038	0,019	0,041	0,090	0,041
1967	0,046	0,031	0,077	0,030	0,044	0,040	0,019	0,044	0,091	0,039
1968	0,048	0,036	0,082	0,029	0,048	0,042	0,021	0,045	0,091	0,042
1969	0,051	0,039	0,074	0,027	0,050	0,045	0,022	0,049	0,096	0,044
1970	0,052	0,032	0,058	0,029	0,050	0,045	0,023	0,052	0,098	0,049
1971	0,053	0,038	0,055	0,029	0,052	0,042	0,024	0,056	0,103	0,046
1972	0,054	0,046	0,063	0,030	0,053	0,044	0,024	0,052	0,100	0,043
1973	0,055	0,040	0,062	0,031	0,053	0,046	0,028	0,054	0,098	0,043
1974	0,055	0,055	0,081	0,032	0,054	0,044	0,028	0,057	0,098	0,041
1975	0,054	0,053	0,081	0,032	0,053	0,046	0,032	0,054	0,091	0,039
1976	0,052	0,059	0,094	0,034	0,052	0,039	0,032	0,052	0,089	0,037
1977	0,055	0,066	0,087	0,037	0,054	0,042	0,032	0,053	0,094	0,037
1978	0,059	0,068	0,076	0,038	0,058	0,047	0,032	0,058	0,099	0,036
1979	0,061	0,071	0,072	0,040	0,061	0,048	0,030	0,061	0,099	0,038
1980	0,060	0,067	0,063	0,039	0,062	0,041	0,031	0,060	0,097	0,034
1981	0,059	0,066	0,076	0,040	0,062	0,039	0,030	0,060	0,092	0,032
1982	0,057	0,073	0,081	0,039	0,059	0,038	0,030	0,057	0,090	0,033
1983	0,055	0,069	0,066	0,041	0,058	0,031	0,029	0,056	0,083	0,032
1984	0,054	0,066	0,050	0,042	0,058	0,029	0,031	0,057	0,081	0,029
1985	0,054	0,057	0,048	0,040	0,058	0,029	0,031	0,057	0,077	0,028
1986	0,053	0,059	0,049	0,040	0,057	0,029	0,026	0,053	0,077	0,024
1987	0,051	0,054	0,053	0,038	0,055	0,030	0,025	0,049	0,072	0,022
1988	0,049	0,059	0,060	0,039	0,055	0,027	0,020	0,045	0,068	0,019
1989	0,049	0,066	0,059	0,039	0,055	0,032	0,020	0,044	0,066	0,019
1990	0,046	0,061	0,058	0,036	0,051	0,031	0,019	0,037	0,057	0,019

Table 2.5 PRODUCTIVITY IN BOSNIA AND HERZEGOVINA:
HYPOTHETICAL GDP

In 1972 prices

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	17058	556	30	1264	8042	2742	758	1702	1484	481
1966	18623	601	35	1291	8979	2792	823	1877	1683	541
1967	18748	588	37	1224	9063	2776	805	1881	1816	558
1968	19545	569	39	1272	9354	2904	825	2015	1989	578
1969	21335	564	46	1451	10183	3218	881	2164	2193	635
1970	23174	580	49	1475	11104	3623	953	2289	2421	682
1971	25463	586	62	1578	12355	3918	1023	2431	2748	763
1972	26862	554	62	1591	13090	3907	1074	2676	3084	824
1973	28225	576	57	1611	13972	3980	1011	2803	3328	888
1974	31485	614	64	1703	15572	4540	1139	3057	3694	1103
1975	33685	625	63	1723	16865	4887	1162	3192	3952	1216
1976	35142	640	62	1597	17685	5134	1230	3377	4106	1312
1977	38037	722	82	1660	19264	5460	1353	3661	4380	1456
1978	41285	771	99	1676	20855	6024	1528	3863	4817	1652
1979	44048	833	110	1681	22356	6572	1619	3909	5191	1776
1980	45868	886	117	1642	23612	6712	1621	3993	5459	1827
1981	47179	946	116	1661	24554	6754	1697	4080	5480	1889
1982	47878	983	110	1684	25135	6784	1725	4035	5519	1904
1983	48779	1069	130	1619	25746	6640	1775	4078	5713	2009
1984	50323	1147	161	1637	26909	6508	1758	4159	5857	2187
1985	51977	1188	173	1699	28265	6291	1812	4247	6059	2243
1986	54257	1288	166	1713	29884	6296	1926	4376	6309	2298
1987	53970	1280	149	1661	30168	6096	1868	4286	6225	2237
1988	53553	1093	134	1519	29866	5493	2244	4425	6249	2530
1989	53818	1064	138	1490	30192	5257	2376	4504	6316	2480
1990	48606	1027	118	1311	27780	4482	1930	4119	5638	2201

Table 2.6 PRODUCTIVITY IN BOSNIA AND HERZEGOVINA:
STRUCTURAL SHIFT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-371	-174	3	-419	-836	-267	-406	162	1502	65
1966	-514	-111	2	-415	-922	-299	-462	98	1560	34
1967	-429	-71	-4	-337	-1147	-211	-458	131	1689	-21
1968	-432	-62	3	-364	-1130	-286	-460	107	1749	10
1969	-587	-35	1	-495	-1208	-394	-504	110	1928	9
1970	-592	-77	-5	-479	-1305	-425	-546	142	2131	-27
1971	-797	8	-2	-554	-1444	-670	-590	147	2391	-83
1972	-653	-11	-6	-538	-1414	-686	-597	104	2619	-124
1973	-648	16	-6	-535	-1485	-793	-537	216	2647	-171
1974	-787	31	1	-584	-1492	-1003	-606	324	2808	-265
1975	-649	-38	-2	-586	-1330	-862	-532	199	2806	-302
1976	-738	28	2	-523	-1333	-874	-551	161	2704	-352
1977	-729	50	2	-480	-1317	-961	-634	95	2955	-439
1978	-679	-3	-9	-529	-1374	-1003	-766	202	3339	-535
1979	-690	-3	-14	-525	-1228	-1054	-836	171	3393	-594
1980	-622	-3	-12	-536	-908	-1230	-841	223	3320	-634
1981	-632	-6	-11	-498	-424	-1437	-873	251	3045	-678
1982	-786	76	-10	-443	-585	-1684	-848	154	3202	-648
1983	-734	76	-10	-392	-178	-2154	-866	275	3175	-660
1984	-692	147	-21	-371	264	-2274	-859	347	2844	-768
1985	-523	60	-20	-397	363	-2181	-857	451	2826	-767
1986	-577	145	-18	-411	353	-2218	-1044	567	2976	-928
1987	-470	125	-12	-373	503	-2052	-1069	875	2503	-969
1988	-603	115	-7	-281	702	-1930	-1283	961	2190	-1070
1989	-681	141	-11	-284	789	-1786	-1327	983	2114	-1299
1990	-768	200	0	-300	-49	-1517	-990	1021	1945	-1077

Table 2.7 PRODUCTIVITY IN BOSNIA AND HERZEGOVINA:
DIFFERENTIAL SHIFT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-154	-121	7	-123	849	-278	-19	-309	-64	-96
1966	-918	-118	20	-138	212	-285	-40	-359	-99	-113
1967	-1163	-148	24	-158	145	-340	-37	-344	-208	-97
1968	-1132	-116	19	-193	251	-283	-38	-379	-270	-122
1969	-1241	-130	15	-239	161	-202	-23	-370	-314	-138
1970	-1891	-186	5	-248	-188	-350	-32	-381	-431	-81
1971	-2140	-226	-3	-263	-260	-546	-27	-304	-417	-93
1972	-2386	-124	9	-278	-325	-365	-45	-494	-645	-119
1973	-2750	-222	6	-281	-637	-214	-19	-572	-707	-104
1974	-3748	-124	16	-287	-1147	-433	-48	-681	-904	-139
1975	-4556	-69	19	-284	-1682	-524	-46	-691	-1112	-166
1976	-5678	-82	26	-233	-2117	-1123	-65	-784	-1095	-205
1977	-5897	-58	23	-263	-2284	-1061	-66	-827	-1154	-208
1978	-5984	-22	17	-241	-2287	-956	-61	-843	-1334	-257
1979	-5974	-2	15	-233	-2062	-1154	-101	-764	-1419	-252
1980	-6986	-55	-1	-210	-2398	-1618	-83	-895	-1407	-319
1981	-6866	-54	20	-220	-2360	-1569	-104	-831	-1406	-342
1982	-7178	-13	29	-278	-2814	-1362	-118	-828	-1460	-334
1983	-8209	-40	9	-240	-3310	-1374	-140	-948	-1778	-386
1984	-8775	-157	-21	-248	-3719	-1409	-99	-998	-1663	-461
1985	-9469	-222	-28	-281	-4095	-1343	-117	-1019	-1823	-540
1986	-10397	-287	-26	-282	-4383	-1337	-118	-1444	-1997	-523
1987	-10944	-332	-14	-321	-4782	-1232	-82	-1900	-1790	-491
1988	-11598	-190	0	-299	-4898	-1204	-247	-2255	-1801	-706
1989	-11514	-106	0	-306	-5167	-860	-318	-2396	-1903	-459
1990	-10604	-179	-3	-218	-3987	-670	-315	-2621	-2170	-422

Table 2.8 PRODUCTIVITY IN BOSNIA AND HERZEGOVINA:
RATIO OF HYPOTHETICAL AND REAL GDP

In %

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	103.2	213.1	76.0	175.1	99.8	124.8	227.5	109.5	50.8	106.9
1966	108.3	161.4	60.4	174.9	108.6	126.4	256.1	116.1	53.5	116.9
1967	109.3	159.6	65.0	167.9	112.4	124.7	259.7	112.8	55.1	126.6
1968	108.7	145.4	64.3	177.9	110.4	124.4	252.0	115.6	57.3	124.0
1969	109.4	141.5	74.8	202.1	111.5	122.7	249.2	113.6	57.6	125.6
1970	112.0	183.1	99.6	197.2	115.5	127.2	253.6	111.7	58.8	118.8
1971	113.0	159.2	108.8	207.3	116.0	145.0	252.4	106.9	58.2	129.9
1972	112.8	132.2	95.6	205.5	115.3	136.8	248.6	117.0	61.0	141.9
1973	113.7	155.6	99.6	202.6	117.9	133.9	222.5	114.5	63.2	144.8
1974	116.8	117.9	79.6	204.7	120.4	146.3	234.7	113.2	66.0	157.8
1975	118.3	120.7	79.0	202.0	121.7	139.6	199.2	118.2	70.0	162.6
1976	122.3	109.3	68.4	189.9	124.2	163.7	200.5	122.6	71.8	173.7
1977	121.1	101.2	76.5	181.2	123.0	158.8	207.2	125.0	70.9	180.0
1978	119.2	103.4	92.4	185.1	121.3	148.2	218.1	119.9	70.6	192.2
1979	117.8	100.6	99.4	182.1	117.3	150.6	237.5	117.9	72.5	191.0
1980	119.9	107.0	112.9	183.2	116.3	173.7	232.8	120.2	74.1	209.1
1981	118.9	106.8	93.0	176.0	112.8	180.2	235.7	116.6	77.0	217.2
1982	120.0	94.0	85.2	174.9	115.6	181.5	227.0	120.1	76.0	206.5
1983	122.4	96.8	101.0	164.1	115.7	213.3	230.8	119.8	80.4	208.8
1984	123.2	100.9	135.3	160.8	114.7	230.4	219.7	118.6	83.2	228.3
1985	123.8	115.8	138.0	166.4	115.2	227.4	216.5	115.4	85.8	239.6
1986	125.4	112.4	136.1	167.8	115.6	229.7	252.1	125.1	86.6	271.3
1987	126.8	119.4	120.9	171.8	116.5	216.9	260.6	131.4	89.7	287.9
1988	129.5	107.3	105.1	161.8	116.3	232.8	314.3	141.3	94.1	335.6
1989	129.3	96.7	109.0	165.5	117.0	201.3	325.1	145.7	96.8	343.5
1990	130.5	98.0	103.0	165.4	117.0	195.3	308.7	163.5	104.2	322.7

Table 2.9 PRODUCTIVITY IN BOSNIA AND HERZEGOVINA:
RATIO OF STRUCTURAL SHIFT AND REAL GDP

In %

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-2.2	-66.7	6.3	-58.1	-10.4	-12.2	-121.9	10.4	51.4	14.5
1966	-3.0	-29.7	4.3	-56.3	-11.2	-13.5	-143.8	6.1	49.6	7.4
1967	-2.5	-19.4	-6.8	-46.2	-14.2	-9.5	-147.8	7.9	51.2	-4.7
1968	-2.4	-15.7	4.2	-50.8	-13.3	-12.2	-140.4	6.1	50.4	2.2
1969	-3.0	-8.9	1.3	-68.9	-13.2	-15.0	-142.6	5.8	50.6	1.8
1970	-2.9	-24.3	-10.0	-64.0	-13.6	-14.9	-145.2	6.9	51.7	-4.8
1971	-3.5	2.2	-2.9	-72.7	-13.6	-24.8	-145.7	6.5	50.6	-14.1
1972	-2.7	-2.5	-9.0	-69.6	-12.5	-24.0	-138.2	4.6	51.8	-21.4
1973	-2.6	4.4	-10.8	-67.3	-12.5	-26.7	-118.3	8.8	50.3	-27.9
1974	-2.9	5.9	0.8	-70.2	-11.5	-32.3	-124.9	12.0	50.2	-37.9
1975	-2.3	-7.4	-2.9	-68.7	-9.6	-24.6	-91.3	7.4	49.7	-40.4
1976	-2.6	4.7	2.2	-62.2	-9.4	-27.9	-89.9	5.8	47.3	-46.6
1977	-2.3	7.0	2.2	-52.4	-8.4	-27.9	-97.1	3.2	47.8	-54.3
1978	-2.0	-0.4	-8.4	-58.5	-8.0	-24.7	-109.3	6.3	48.9	-62.3
1979	-1.8	-0.3	-12.7	-56.9	-6.4	-24.1	-122.6	5.1	47.4	-63.9
1980	-1.6	-0.3	-11.9	-59.8	-4.5	-31.8	-120.9	6.7	45.0	-72.6
1981	-1.6	-0.6	-8.9	-52.7	-1.9	-38.3	-121.3	7.2	42.8	-77.9
1982	-2.0	7.2	-7.6	-46.0	-2.7	-45.1	-111.5	4.6	44.1	-70.3
1983	-1.8	6.9	-7.6	-39.7	-0.8	-69.2	-112.6	8.1	44.7	-68.7
1984	-1.7	12.9	-17.6	-36.4	1.1	-80.5	-107.4	9.9	40.4	-80.1
1985	-1.2	5.9	-15.9	-38.9	1.5	-78.8	-102.4	12.3	40.0	-81.9
1986	-1.3	12.6	-14.7	-40.2	1.4	-80.9	-136.7	16.2	40.8	-109.5
1987	-1.1	11.6	-9.6	-38.6	1.9	-73.0	-149.1	26.8	36.1	-124.7
1988	-1.5	11.3	-5.2	-30.0	2.7	-81.8	-179.8	30.7	33.0	-142.0
1989	-1.6	12.8	-8.9	-31.5	3.1	-68.4	-181.5	31.8	32.4	-179.9
1990	-2.1	19.1	-0.4	-37.9	-0.2	-66.1	-158.3	40.5	35.9	-157.9

Table 2.10 PRODUCTIVITY IN BOSNIA AND HERZEGOVINA:
RATIO OF DIFFERENTIAL SHIFT AND REAL GDP

In %

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-0.9	-46.3	17.7	-17.0	10.5	-12.6	-5.7	-19.9	-2.2	-21.4
1966	-5.3	-31.7	35.3	-18.7	2.6	-12.9	-12.3	-22.2	-3.2	-24.3
1967	-6.8	-40.2	41.9	-21.7	1.8	-15.3	-11.9	-20.6	-6.3	-21.9
1968	-6.3	-29.6	31.6	-27.0	3.0	-12.1	-11.6	-21.8	-7.8	-26.3
1969	-6.4	-32.6	23.9	-33.2	1.8	-7.7	-6.6	-19.4	-8.2	-27.3
1970	-9.1	-58.8	10.4	-33.1	-2.0	-12.3	-8.4	-18.6	-10.5	-14.1
1971	-9.5	-61.4	-5.9	-34.6	-2.4	-20.2	-6.7	-13.4	-8.8	-15.8
1972	-10.0	-29.7	13.3	-35.9	-2.9	-12.8	-10.4	-21.6	-12.8	-20.5
1973	-11.1	-60.0	11.2	-35.3	-5.4	-7.2	-4.2	-23.4	-13.4	-17.0
1974	-13.9	-23.8	19.6	-34.5	-8.9	-13.9	-9.8	-25.2	-16.2	-19.9
1975	-16.0	-13.3	23.9	-33.3	-12.1	-15.0	-8.0	-25.6	-19.7	-22.2
1976	-19.8	-14.0	29.3	-27.7	-14.9	-35.8	-10.6	-28.5	-19.2	-27.2
1977	-18.8	-8.1	21.3	-28.8	-14.6	-30.9	-10.1	-28.2	-18.7	-25.7
1978	-17.3	-2.9	16.1	-26.6	-13.3	-23.5	-8.7	-26.2	-19.6	-29.9
1979	-16.0	-0.3	13.3	-25.3	-10.8	-26.4	-14.9	-23.0	-19.8	-27.1
1980	-18.3	-6.7	-1.0	-23.4	-11.8	-41.9	-11.9	-26.9	-19.1	-36.5
1981	-17.3	-6.1	15.9	-23.3	-10.8	-41.9	-14.4	-23.8	-19.7	-39.3
1982	-18.0	-1.2	22.3	-28.8	-12.9	-36.5	-15.5	-24.6	-20.1	-36.2
1983	-20.6	-3.6	6.6	-24.4	-14.9	-44.1	-18.2	-27.9	-25.0	-40.2
1984	-21.5	-13.8	-17.7	-24.4	-15.9	-49.9	-12.3	-28.4	-23.6	-48.2
1985	-22.6	-21.6	-22.1	-27.5	-16.7	-48.5	-14.0	-27.7	-25.8	-57.7
1986	-24.0	-25.1	-21.4	-27.6	-17.0	-48.8	-15.4	-41.3	-27.4	-61.7
1987	-25.7	-31.0	-11.3	-33.2	-18.5	-43.8	-11.4	-58.3	-25.8	-63.1
1988	-28.0	-18.6	0.1	-31.8	-19.1	-51.0	-34.5	-72.0	-27.1	-93.6
1989	-27.7	-9.6	-0.1	-34.0	-20.0	-32.9	-43.5	-77.5	-29.2	-63.5
1990	-28.5	-17.1	-2.6	-27.5	-16.8	-29.2	-50.4	-104.0	-40.1	-64.8

Trade was the only sector in Bosnia and Herzegovina which achieved a higher than hypothetical real GDP (except in 1990) every year, in the first place owing to its above-average sectoral productivity (a positive structural shift). Trade's positive structural shift (the difference between global sectoral and global economic productivity) every year was bigger than the negative differential shift (that is, the

negative difference between productivity in the sector of trade and the same sector at the level of Yugoslavia). In the case of trade, too, a steady, relatively downward trend in sectoral productivity was noticeable, the consequence of which were ever smaller total gains in the sector's GDP in Bosnia and Herzegovina (from 49.2% in 1965, to a 4.2% loss in 1990).

Water management was the only sector in Bosnia and Herzegovina in which a greater number of years saw more positive differential shifts (19) than negative (7), the consequence of which was that during 16 years real GDP in this sector exceeded hypothetical. In 1971, 1980 and in the period from 1983 to 1990, this sector, too, achieved a smaller real GDP than hypothetical, owing to both the structural and differential shifts being negative (the exception is the year 1983, when productivity in Bosnia and Herzegovina's water management exceeded average productivity in this sector at the level of Yugoslavia. This positive contribution, however, was surpassed by the sector's negative structural shift.

In addition to trade and water management, agriculture and the manufacturing were also sectors in which real GDP was higher than hypothetical; in agriculture this was the case during four years (1982, 1983, 1989 and 1990) and in the manufacturing during one year – 1965. Agriculture owed this to the positive structural shift exceeding the negative differential shift, and the manufacturing to a positive differential shift, which in 1965 was minimally higher than the negative structural shift.

The positive structural shift of another sector, which had above-average productivity throughout the surveyed period – transport and communication – was annulled by a negative differential shift, i.e. a lower labor productivity than in the transport and communication sector at the level of Yugoslavia. The consequence was a continuous loss in the sector's GDP, ranging from 9.5% in 1965 to 63.5% in 1990.

Except for trade and transport and communication, agriculture, forestry, construction, artisanship and catering and tourism all had a negative differential shift during every year of the surveyed period. This means that as many as seven of the total nine sectors of Bosnia and Herzegovina's economy had in every year from 1965 to 1990 productivity lower than the average in Yugoslavia's corresponding sectors.

Table 2.13 shows even more clearly how productivity in this republic constantly lagged behind productivity in the same sectors at the level of Yugoslavia. Since, by definition, Types 1 and 2 allocation effect characterize the sectors that are comparatively bad (which, in this case, is to say that they had lower productivity than the global average), and since they absolutely dominated in every year of the surveyed period, it is clear that the economy of Bosnia and Herzegovina owed its non-successful GDP primarily to relatively low sectoral labor productivity.

Table 2.11 PRODUCTIVITY IN BOSNIA AND HERZEGOVINA:
NET DIFFERENTIAL SHIFT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-122	-265	14	-47	894	-223	-18	-286	-76	-113
1966	-933	-257	45	-54	214	-246	-38	-341	-120	-137
1967	-1190	-309	60	-59	146	-297	-36	-334	-243	-119
1968	-1135	-242	38	-68	254	-258	-36	-367	-305	-151
1969	-1266	-280	28	-80	163	-185	-23	-359	-358	-171
1970	-1986	-399	10	-84	-190	-311	-30	-379	-498	-104
1971	-2281	-501	-6	-89	-261	-485	-26	-311	-480	-122
1972	-2430	-298	16	-93	-328	-333	-42	-482	-713	-157
1973	-2937	-531	14	-95	-638	-193	-19	-557	-779	-138
1974	-3801	-308	31	-100	-1154	-384	-47	-664	-1004	-170
1975	-4549	-179	38	-102	-1670	-473	-47	-689	-1232	-196
1976	-5649	-212	56	-88	-2087	-1018	-64	-771	-1226	-239
1977	-5839	-139	42	-98	-2237	-998	-66	-811	-1289	-244
1978	-5916	-52	29	-91	-2233	-906	-61	-837	-1474	-291
1979	-5903	-6	24	-89	-2000	-1091	-103	-781	-1573	-284
1980	-7006	-124	-2	-82	-2287	-1561	-89	-932	-1563	-365
1981	-6885	-120	32	-87	-2244	-1503	-109	-866	-1593	-395
1982	-7094	-28	50	-112	-2676	-1272	-124	-883	-1661	-389
1983	-8205	-84	13	-101	-3154	-1281	-148	-1014	-1997	-437
1984	-8877	-324	-27	-105	-3522	-1338	-108	-1077	-1869	-508
1985	-9654	-457	-33	-118	-3851	-1323	-127	-1114	-2035	-596
1986	-10688	-569	-33	-120	-4114	-1329	-125	-1592	-2220	-587
1987	-11253	-662	-20	-138	-4473	-1230	-87	-2086	-1997	-560
1988	-11797	-443	0	-136	-4607	-1258	-219	-2404	-2006	-725
1989	-11570	-256	0	-139	-4864	-908	-263	-2530	-2130	-479
1990	-10898	-413	-4	-102	-3744	-729	-251	-2764	-2448	-452

Forestry is an example of specialization in a non-competitive sector (from the point of view of productivity): every year it was marked by the Type 1 allocation effect. Construction differed from forestry only in the last three years – during this time, the sector was Type 2, while in all of the others it was Type 1. The manufacturing is an example of bad investment: from being non-specialized but competitive (in the first three years, i.e. from 1965 to 1969, it was a Type 3 allocation effect sec-

tor), it joined the category of non-specialized and non-competitive sectors (of Type 2, in the period from 1970 to 1974), only to become of above-average share and non-competitive (Type 1 allocation effect) in the last 16 years (from 1975 to 1990).

Table 2.12 PRODUCTIVITY IN BOSNIA AND HERZEGOVINA:
ALLOCATION EFFECT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-32	144	-7	-76	-45	-54	-1	-23	12	17
1966	15	139	-25	-84	-2	-39	-2	-18	21	24
1967	27	161	-36	-99	-1	-43	-1	-10	34	22
1968	3	126	-19	-125	-3	-25	-2	-12	36	28
1969	25	150	-13	-159	-3	-17	-0	-11	45	33
1970	94	213	-5	-164	2	-39	-1	-2	66	24
1971	141	275	2	-175	1	-61	-1	7	63	29
1972	44	173	-7	-185	3	-31	-2	-12	68	37
1973	187	309	-8	-186	1	-21	0	-15	72	34
1974	53	184	-15	-188	7	-49	-1	-16	100	31
1975	-6	110	-19	-182	-12	-52	0	-2	120	30
1976	-28	130	-29	-145	-30	-105	-1	-14	131	34
1977	-58	81	-19	-165	-47	-63	-0	-16	136	36
1978	-67	30	-12	-150	-54	-50	0	-6	140	34
1979	-71	3	-9	-144	-62	-63	2	17	154	32
1980	20	69	1	-128	-111	-56	6	37	156	47
1981	19	66	-12	-133	-116	-66	6	34	187	53
1982	-84	15	-21	-166	-138	-91	6	55	201	55
1983	-4	44	-4	-140	-156	-92	8	66	219	51
1984	102	168	6	-143	-197	-72	9	79	206	47
1985	184	235	5	-163	-245	-20	9	94	212	56
1986	291	282	7	-161	-269	-8	7	147	222	64
1987	309	330	6	-183	-310	-2	5	187	207	69
1988	199	253	-0	-163	-291	54	-27	149	206	19
1989	55	150	0	-167	-303,	49	-54,6	134	226	20
1990	294	234,	2	-116	-243	60	-64,4	134	278	11

Table 2.13 PRODUCTIVITY IN BOSNIA AND HERZEGOVINA:
TYPES OF ALLOCATION EFFECT

Year	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	2	3	1	3	1	1	1	2	2
1966	2	3	1	3	1	1	1	2	2
1967	2	3	1	3	1	1	1	2	2
1968	2	3	1	3	1	1	1	2	2
1969	2	3	1	3	1	1	1	2	2
1970	2	3	1	2	1	1	1	2	2
1971	2	2	1	2	1	1	2	2	2
1972	2	3	1	2	1	1	1	2	2
1973	2	3	1	2	1	2	1	2	2
1974	2	3	1	2	1	1	1	2	2
1975	2	3	1	1	1	2	1	2	2
1976	2	3	1	1	1	1	1	2	2
1977	2	3	1	1	1	1	1	2	2
1978	2	3	1	1	1	2	1	2	2
1979	2	3	1	1	1	2	2	2	2
1980	2	2	1	1	1	2	2	2	2
1981	2	3	1	1	1	2	2	2	2
1982	2	3	1	1	1	2	2	2	2
1983	2	3	1	1	1	2	2	2	2
1984	2	2	1	1	1	2	2	2	2
1985	2	2	1	1	1	2	2	2	2
1986	2	2	1	1	1	2	2	2	2
1987	2	2	1	1	1	2	2	2	2
1988	2	3	1	1	2	1	2	2	2
1989	2	2	1	1	2	1	2	2	2
1990	2	2	1	1	2	1	2	2	2

In the entire surveyed period agriculture, trade and catering and tourism were characterized by the Type 2 allocation effect: the productivity of employees in these sectors was below the Yugoslav average, but Bosnia and Herzegovina did not specialize in them.

Sub-periods marked by Types 1 and 2 alternated in artisanship and transport and communication. In the first half of the surveyed period in both sectors the Type 1 allo-

cation effect was dominant, whereas Type 2 characterized the other half. In other words, productivity did not increase, while the number of employees went down relatively.

As shown in the analysis of the relative differential shift, water management was the sole sector in Bosnia and Herzegovina’s economy that in a greater number of years (18) had above-average productivity when it was characterized by the Type 3 allocation effect (meaning that in this sector in Bosnia and Herzegovina no above-average number of workers was employed). In other years, this sector was Type 2.

Montenegro

Table 2.14 offers an overview of GDP trends, while *Table 2.15* shows trends in productivity in the Montenegrin *social* (non-private, “socialized“, socialist) sector’s economy in the period from 1965 to 1990.

Montenegro’s economy achieved its peak average productivity in 1980, when one worker generated 71,000 dinars of GDP. Much like the economy of Bosnia and Herzegovina, its lowest productivity in the surveyed period was in 1965. During this year, one worker produced a GDP which was almost by one-third smaller than in its “most productive” year – only 48,000 dinars.

Montenegro’s productivity in the surveyed period (1965-1990) was on average around 54,000 dinars per worker. On average, employees in the water management sector were the most productive (one worker in this sector produced 78,000 dinars of the sector’s GDP). The least productive employees were in the artisanship sector, where one worker contributed just 5,000 to the sector’s GDP.

In the first six years (from 1965-1970) of the surveyed period Montenegro’s GDP was larger than hypothetical ((*Table 2.19*) owing to a positive differential shift (*Table 2.20*), which in this period exceeded the negative structural shift (*Table 2.21*). That is to say that the effects of higher sectoral labor productivity in Montenegro relative to global sectoral productivity surpassed the effects of unfavorable structure, i.e. the above-average number of low productivity sectors at the level of Yugoslavia. This secured Montenegro a “gain” of 8.8% (1970) and 10.4% (1968) in GDP in said years.

Table 2.14 MONTENEGRO: GDP OF THE SOCIAL SECTOR

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	2562	61	3	106	992	439	19	342	434	166
1966	2672	70	3	108	1042	395	18	388	431	217
1967	2738	75	3	106	1008	418	20	417	494	197
1968	2897	70	3	104	1056	465	22	447	512	218
1969	3268	60	3	104	1193	551	23	495	583	255

1970	3537	71	3	109	1210	622	24	555	650	292
1971	3727	67	3	111	1205	621	22	583	800	316
1972	3944	59	3	114	1262	709	25	588	869	315
1973	3927	75	3	116	1281	575	26	628	875	349
1974	4202	84	4	122	1456	511	26	681	950	368
1975	4260	87	4	125	1419	582	26	681	1030	307
1976	4473	100	4	123	1541	630	27	694	1010	344
1977	5047	91	5	134	1893	706	30	739	1078	371
1978	5449	88	5	132	2086	709	32	813	1189	395
1979	5439	92	4	127	2281	764	33	785	1194	158
1980	6716	106	3	116	2421	1076	35	1147	1474	338
1981	6649	118	4	114	2479	1183	35	1147	1183	386
1982	6543	171	4	139	2351	1144	36	1078	1238	382
1983	6481	189	4	131	2429	851	39	1264	1186	388
1984	6869	201	4	142	2921	711	40	1333	1139	378
1985	6959	197	3	145	2948	661	40	1404	1157	404
1986	7277	245	3	149	3088	657	32	1589	1162	352
1987	6878	256	3	146	2948	591	26	1476	1101	331
1988	6724	205	2	143	2940	428	18	1544	1057	387
1989	6718	249	2	145	3001	531	17	1436	1029	308
1990	5903	2010	2	118	2482	441	13	1425	913	299

Table 2.15 MONTENEGRO: LABOR PRODUCTIVITY

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	0,048	0,025	0,150	0,038	0,046	0,050	0,004	0,053	0,110	0,049
1966	0,051	0,028	0,188	0,040	0,049	0,052	0,004	0,062	0,104	0,058
1967	0,052	0,033	0,214	0,043	0,049	0,056	0,005	0,065	0,114	0,048
1968	0,055	0,028	0,214	0,038	0,053	0,058	0,005	0,068	0,126	0,055
1969	0,058	0,025	0,125	0,037	0,058	0,059	0,005	0,070	0,120	0,058
1970	0,061	0,033	0,130	0,043	0,056	0,063	0,006	0,079	0,120	0,057
1971	0,059	0,031	0,125	0,043	0,053	0,057	0,005	0,074	0,115	0,055
1972	0,059	0,027	0,063	0,049	0,052	0,066	0,005	0,069	0,108	0,047
1973	0,057	0,036	0,065	0,049	0,052	0,059	0,005	0,070	0,101	0,050
1974	0,059	0,040	0,121	0,049	0,055	0,051	0,005	0,074	0,106	0,051

1975	0,057	0,036	0,093	0,046	0,051	0,057	0,005	0,073	0,107	0,042
1976.	0,058	0,041	0,100	0,043	0,052	0,064	0,006	0,070	0,096	0,042
1977	0,061	0,051	0,111	0,046	0,059	0,061	0,007	0,071	0,093	0,041
1978	0,064	0,054	0,083	0,044	0,063	0,064	0,008	0,076	0,093	0,043
1979	0,061	0,053	0,061	0,040	0,066	0,064	0,007	0,069	0,091	0,018
1980	0,071	0,062	0,043	0,039	0,067	0,079	0,007	0,097	0,105	0,037
1981	0,067	0,065	0,069	0,037	0,064	0,092	0,007	0,092	0,079	0,038
1982	0,064	0,081	0,400	0,046	0,058	0,089	0,007	0,087	0,079	0,037
1983	0,061	0,082	0,400	0,045	0,058	0,070	0,007	0,095	0,071	0,036
1984	0,061	0,084	0,400	0,046	0,065	0,059	0,007	0,096	0,066	0,029
1985	0,060	0,082	0,300	0,050	0,062	0,054	0,006	0,097	0,063	0,033
1986	0,060	0,084	0,300	0,051	0,063	0,049	0,005	0,105	0,060	0,027
1987	0,055	0,069	0,300	0,047	0,057	0,046	0,005	0,099	0,056	0,025
1988	0,055	0,054	0,200	0,045	0,057	0,042	0,003	0,104	0,052	0,030
1989	0,055	0,064	0,024	0,046	0,055	0,056	0,004	0,094	0,052	0,024
1990	0,049	0,033	0,033	0,039	0,044	0,045	0,006	0,100	0,055	0,026

Table 2.16 PRODUCTIVITY IN MONTENEGRO: HYPOTHETICAL GDP

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	2311	103	1	118	924	377	199	275	169	144
1966	2541	118	1	130	1027	367	217	301	199	182
1967	2606	113	1	123	1035	373	222	318	216	205
1968	2742	130	1	143	1037	419	244	346	213	209
1969	3103	133	1	156	1133	522	248	395	270	245
1970	3359	124	1	146	1250	568	250	407	314	298
1971	3814	129	1	157	1367	659	263	475	417	345
1972	4090	133	3	140	1473	650	282	514	489	406
1973	4253	130	3	147	1534	602	312	554	539	433
1974	4599	134	2	161	1703	643	321	594	577	462
1975	4753	154	3	174	1778	654	310	600	615	466
1976	4975	156	3	182	1885	632	280	635	673	531
1977	5572	119	3	195	2136	773	274	696	771	604
1978	5987	114	4	210	2304	775	302	747	893	639
1979.	6415	126	5	227	2496	859	321	819	940	623

1980	6729	122	5	211	2572	971	346	847	1003	652
1981	7006	129	4	215	2737	903	369	876	1061	712
1982	7018	144	1	206	2784	887	371	852	1072	701
1983	7075	153	1	194	2816	814	374	888	1108	727
1984	7548	161	1	208	3006	805	396	933	1161	879
1985	7719	159	1	192	3146	816	411	962	1221	810
1986	8109	193	1	193	3281	883	392	1009	1295	863
1987	8107	239	1	200	3368	827	368	963	1267	873
1988	7807	242	1	203	3299	642	362	941	1291	826
1989	7860	247	5	202	3492	601	244	974	1277	816
1990	7182	385	4	179	3350	588	134	855	986	702

Table 2.17 PRODUCTIVITY IN MONTENEGRO: STRUCTURAL SHIFT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-94	-32	0	-39	-96	-37	-107	26	171	20
1966	-119	-22	0	-42	-105	-39	-122	16	184	12
1967	-118	-14	-0	-34	-131	-28	-126	22	201	-8
1968	-148	-14	0	-41	-125	-41	-136	18	187	4
1969	-140	-8	0	-53	-134	-64	-142	20	238	3
1970	-131	-16	-0	-47	-147	-67	-143	25	276	-12
1971	-123	2	-0	-55	-160	-113	-152	29	363	-37
1972	-107	-3	-0	-47	-159	-114	-157	20	415	-61
1973	-106	4	-0	-49	-163	-120	-166	43	429	-83
1974	-134	7	0	-55	-163	-142	-171	63	439	-111
1975	-107	-9	-0	-59	-140	-115	-142	37	437	-116
1976	-96	7	0	-60	-142	-108	-125	30	444	-142
1977	-102	8	0	-56	-146	-136	-129	18	520	-182
1978	-48	-0	-0	-66	-152	-129	-151	39	619	-207
1979	-71	-0	-1	-71	-137	-138	-166	36	614	-208
1980	-96	-0	-1	-69	-99	-178	-180	47	610	-226
1981	-107	-1	-0	-65	-47	-192	-190	54	589	-255
1982	-95	11	-0	-54	-65	-220	-182	32	622	-239
1983	-65	11	-0	-47	-19	-264	-182	60	616	-239
1984	-139	21	-0	-47	29	-281	-193	78	564	-308

1985	-79	8	-0	-45	40	-283	-195	102	570	-277
1986	-116	22	-0	-46	39	-311	-212	131	611	-349
1987	-127	23	-0	-45	56	-279	-211	197	509	-378
1988	-60	25	-0	-38	78	-226	-207	204	452	-350
1989	-43	33	0	-39	91	-204	-136	212	428	-428
1990	-31	75	0	-41	-6	-199	-69	212	340	-343

Table 2.18 PRODUCTIVITY IN MONTENEGRO: DIFFERENTIAL SHIFT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	345	-10	2	27	164	99	-73	40	93	2
1966	249	-27	2	19	120	68	-77	71	48	24
1967	250	-25	2	17	104	74	-75	77	77	-1
1968	302	-46	2	2	144	87	-86	83	111	4
1969	305	-65	2	1	194	93	-83	81	75	7
1970	310	-37	2	10	107	121	-83	123	60	6
1971	36	-64	2	9	-3	75	-89	79	20	7
1972	-40	-71	0	21	-52	173	-101	53	-35	-29
1973	-220	-59	0	18	-90	93	-120	32	-93	-1
1974	-263	-58	2	16	-84	10	-124	24	-67	17
1975	-385	-57	1	10	-218	43	-142	43	-23	-43
1976	-406	-63	1	1	-202	106	-127	29	-107	-45
1977	-422	-36	2	-4	-97	68	-116	25	-214	-50
1978	-490	-26	1	-11	-66	63	-118	27	-323	-37
1979	-905	-34	-0	-29	-78	43	-122	-70	-359	-256
1980	83	-15	-1	-26	-52	283	-132	253	-139	-88
1981	-250	-10	0	-37	-211	472	-144	218	-467	-71
1982	-381	16	3	-13	-368	478	-153	193	-456	-80
1983	-528	25	3	-16	-368	301	-152	317	-538	-100
1984	-540	19	3	-19	-114	187	-162	323	-585	-192
1985	-680	30	2	-2	-238	128	-177	340	-634	-129
1986	-716	31	2	3	-231	85	-147	449	-744	-163
1987	-1102	-6	2	-9	-476	42	-132	316	-675	-164
1988	-1023	-62	1	-23	-437	12	-137	399	-686	-90
1989	-1098	-31	-3	-19	-582	134	-91	250	-676	-81
1990	-1248	-250	-2	-20	-862	52	-52	358	-413	-59

Table 2.19 PRODUCTIVITY IN MONTENEGRO:
RATIO OF HYPOTHETICAL AND REAL GDP

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	90.2	170.0	28.6	111.7	93.1	85.7	1025.9	80.6	39.0	87.0
1966	95.1	169.4	25.7	120.8	98.6	92.7	1204.9	77.7	46.1	83.7
1967	95.2	151.7	23.3	116.5	102.7	89.1	1094.8	76.2	43.7	104.4
1968	94.7	185.8	24.5	137.2	98.2	90.2	1134.0	77.4	41.6	96.2
1969	95.0	221.8	44.4	150.1	95.0	94.7	1086.1	79.7	46.4	96.1
1970	95.0	174.8	44.2	133.9	103.3	91.3	1032.2	73.3	48.3	102.1
1971	102.3	192.6	48.2	141.3	113.5	106.1	1189.8	81.5	52.2	109.5
1972	103.7	226.1	97.1	122.8	116.7	91.7	1138.2	87.5	56.2	128.6
1973	108.3	174.3	95.0	126.8	119.7	104.7	1198.3	88.2	61.6	124.2
1974	109.4	160.9	53.3	132.2	117.0	125.8	1235.9	87.2	60.8	125.5
1975	111.6	176.2	68.7	139.5	125.3	112.4	1190.6	88.1	59.8	151.8
1976	111.2	156.0	64.1	147.9	122.3	100.3	1027.7	91.4	66.7	154.4
1977	110.4	130.7	60.1	145.2	112.8	109.6	911.9	94.2	71.6	162.5
1978	109.9	129.9	83.9	158.7	110.4	109.4	930.6	91.9	75.1	161.9
1979	117.9	137.0	118.7	178.4	109.4	112.4	963.3	104.3	78.7	394.0
1980	100.2	114.7	164.7	181.8	106.2	90.3	1004.2	73.8	68.0	192.9
1981	105.4	108.9	102.2	189.0	110.4	76.4	1053.3	76.3	89.7	184.5
1982	107.3	84.4	17.2	148.3	118.4	77.5	1031.0	79.1	86.6	183.5
1983	109.2	81.2	16.7	147.7	115.9	95.7	958.2	70.2	93.4	187.5
1984	109.9	80.1	16.8	146.5	102.9	113.2	989.6	70.0	101.9	232.5
1985	110.9	80.9	22.1	132.7	106.7	123.5	1028.7	68.5	105.5	200.4
1986	111.4	78.6	22.1	129.3	106.2	134.4	1224.4	63.5	111.4	245.3
1987	117.9	93.4	21.5	137.3	114.2	140.0	1417.2	65.3	115.1	263.6
1988	116.1	117.8	31.8	142.3	112.2	150.0	2013.1	60.9	122.1	213.5
1989	117.0	99.2	262.3	139.5	116.4	113.2	1436.7	67.8	124.1	265.0
1990	121.7	183.4	179.6	151.7	135.0	133.3	1033.1	60.0	108.0	234.7

Table 2.20 PRODUCTIVITY IN MONTENEGRO:
RATIO OF STRUCTURAL SHIFT AND REAL GDP

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-3.7	-53.2	2.4	-37.1	-9.7	-8.3	-549.5	7.7	39.5	11.8
1966	-4.4	-31.2	1.8	-38.9	-10.1	-9.9	-676.6	4.1	42.7	5.3
1967	-4.3	-18.4	-2.5	-32.1	-13.0	-6.8	-623.0	5.3	40.7	-3.9
1968	-5.1	-20.1	1.6	-39.2	-11.9	-8.9	-631.9	4.1	36.6	1.7
1969	-4.3	-13.9	0.8	-51.1	-11.3	-11.6	-621.4	4.1	40.8	1.3
1970	-3.7	-23.2	-4.5	-43.5	-12.1	-10.7	-591.0	4.6	42.5	-4.1
1971	-3.3	2.6	-1.3	-49.6	-13.3	-18.2	-686.9	4.9	45.4	-11.9
1972	-2.7	-4.3	-9.1	-41.6	-12.6	-16.1	-632.9	3.4	47.8	-19.4
1973	-2.7	4.9	-10.3	-42.1	-12.7	-20.9	-637.0	6.8	49.0	-23.9
1974	-3.2	8.0	0.5	-45.3	-11.2	-27.8	-657.5	9.2	46.2	-30.1
1975	-2.5	-10.9	-2.5	-47.5	-9.9	-19.8	-545.4	5.5	42.4	-37.7
1976	-2.1	6.7	2.1	-48.4	-9.2	-17.1	-460.8	4.4	43.9	-41.4
1977	-2.0	9.0	1.8	-42.0	-7.7	-19.3	-427.4	2.4	48.3	-49.0
1978	-0.9	-0.5	-7.7	-50.1	-7.3	-18.2	-466.6	4.8	52.0	-52.5
1979	-1.3	-0.5	-15.2	-55.7	-6.0	-18.0	-497.3	4.6	51.4	-131.8
1980	-1.4	-0.4	-17.4	-59.4	-4.1	-16.5	-521.4	4.1	41.4	-67.0
1981	-1.6	-0.6	-9.8	-56.6	-1.9	-16.2	-542.1	4.7	49.8	-66.2
1982	-1.4	6.5	-1.5	-39.1	-2.8	-19.2	-506.5	3.0	50.2	-62.5
1983	-1.0	5.7	-1.3	-35.7	-0.8	-31.0	-467.5	4.7	51.9	-61.6
1984	-2.0	10.2	-2.2	-33.2	1.0	-39.6	-483.6	5.8	49.5	-81.6
1985	-1.1	4.1	-2.5	-31.0	1.4	-42.8	-486.8	7.3	49.2	-68.5
1986	-1.6	8.8	-2.4	-31.0	1.3	-47.4	-663.9	8.2	52.6	-99.0
1987	-1.8	9.1	-1.7	-30.8	1.9	-47.1	-811.2	13.3	46.3	-114.2
1988	-0.9	12.4	-1.6	-26.4	2.6	-52.7	-1151.4	13.2	42.8	-90.3
1989	-0.6	13.2	-21.4	-26.6	3.0	-38.5	-802.4	14.8	41.5	-138.8
1990	-0.5	35.7	-0.7	-34.7	-0.2	-45.1	-529.8	14.9	37.3	-114.9

Table 2.21 PRODUCTIVITY IN MONTENEGRO:
RATIO OF DIFFERENTIAL SHIFT AND REAL GDP

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	13.5	-16.7	69.0	25.3	16.6	22.6	-376.4	11.8	21.5	1.1
1966	9.3	-38.2	72.5	18.0	11.5	17.2	-428.3	18.3	11.2	10.9
1967	9.1	-33.3	79.2	15.6	10.3	17.7	-371.9	18.5	15.6	-0.5
1968	10.4	-65.7	73.9	2.0	13.7	18.7	-402.0	18.5	21.7	2.1
1969	9.3	-107.9	54.9	1.1	16.3	16.9	-364.7	16.3	12.9	2.6
1970	8.8	-51.6	60.2	9.6	8.9	19.4	-341.2	22.1	9.3	2.0
1971	1.0	-95.3	53.1	8.3	-0.2	12.0	-402.8	13.6	2.5	2.4
1972	-1.0	-121.8	12.0	18.8	-4.1	24.4	-405.3	9.1	-4.0	-9.2
1973	-5.6	-79.3	15.3	15.3	-7.0	16.2	-461.3	5.0	-10.6	-0.3
1974	-6.3	-69.0	46.2	13.1	-5.8	2.0	-478.4	3.6	-7.0	4.6
1975	-9.0	-65.4	33.8	8.0	-15.4	7.4	-545.1	6.4	-2.2	-14.1
1976	-9.1	-62.7	33.8	0.6	-13.1	16.8	-467.0	4.2	-10.6	-13.0
1977	-8.4	-39.7	38.1	-3.2	-5.1	9.7	-384.5	3.4	-19.9	-13.5
1978	-9.0	-29.4	23.7	-8.5	-3.2	8.8	-364.0	3.3	-27.2	-9.4
1979	-16.6	-36.6	-3.5	-22.7	-3.4	5.6	-365.9	-8.9	-30.1	-162.2
1980	1.2	-14.3	-47.3	-22.5	-2.2	26.3	-382.8	22.0	-9.4	-25.9
1981	-3.8	-8.3	7.7	-32.4	-8.5	39.9	-411.1	19.0	-39.5	-18.4
1982	-5.8	9.1	84.3	-9.3	-15.6	41.7	-424.4	17.9	-36.9	-21.0
1983	-8.1	13.0	84.6	-12.0	-15.1	35.4	-390.7	25.0	-45.3	-25.8
1984	-7.9	9.7	85.4	-13.3	-3.9	26.3	-405.9	24.2	-51.4	-50.9
1985	-9.8	15.1	80.4	-1.7	-8.1	19.3	-441.9	24.2	-54.8	-31.9
1986	-9.8	12.6	80.3	1.7	-7.5	12.9	-460.5	28.2	-64.0	-46.2
1987	-16.0	-2.5	80.2	-6.4	-16.1	7.1	-506.0	21.4	-61.3	-49.4
1988	-15.2	-30.3	69.8	-15.9	-14.9	2.7	-761.8	25.8	-64.9	-23.2
1989	-16.3	-12.4	-140.9	-12.9	-19.4	25.2	-534.3	17.4	-65.7	-26.2
1990	-21.1	-119.1	-78.9	-17.0	-34.7	11.8	-403.3	25.2	-45.3	-19.9

The last year with a positive differential shift was 1971, but the effects of the relatively higher productivity in it were annulled by the negative influence of structure, making, for the first time, real GDP smaller (by 2.3%) than hypothetical. From then on, until the end of the surveyed period, the republic's real GDP was smaller than hypothetical, which was primarily the consequence of a relative drop in sectoral labor productivity in Montenegro, i.e. an increase in the negative difference

between the republic's sectoral productivity and average Yugoslav sectoral productivity. Also, during all these years the structural shift was negative, but the negative influence of structure was smaller in the final than in the initial years of the analyzed period.

GDP in the transport and communication sector was higher every year (except for 1979) than the hypothetical value, making this sector the top performing sector in Montenegro's economy. Its productivity surpassed average Yugoslav productivity by 19.4% in 1965 and by 40% in 1990. The only negative differential shift was in the year 1979, which caused the sector's real GDP to be lower than hypothetical by 4.3%. In all of the other years the sector's differential shift was positive and its contribution to GDP ranged from 3.3% (in 1978) to 28.2% (in 1986).

Table 2.22 PRODUCTIVITY IN MONTENEGRO: NET DIFFERENTIAL SHIFT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	429	-16	20	15	204	79	-36	31	132	1
1966	304	-40	30	10	145	61	-38	57	67	12
1967	339	-37	44	9	127	67	-37	62	105	-0
1968	430	-59	33	1	185	77	-39	65	165	2
1969	389	-86	16	0	258	77	-42	62	101	3
1970	345	-53	19	5	140	99	-44	99	78	3
1971	18	-96	17	5	-4	59	-50	62	22	3
1972	-83	-109	2	12	-71	145	-55	41	-37	-12
1973	-252	-94	3	10	-123	84	-59	23	-95	-0
1974	-282	-96	16	9	-113	9	-63	18	-69	7
1975	-405	-85	9	5	-290	41	-76	32	-23	-19
1976	-417	-94	10	0	-264	110	-78	22	-104	-18
1977	-408	-77	14	-2	-126	66	-83	19	-199	-21
1978	-438	-61	7	-5	-85	67	-87	20	-279	-16
1979	-723	-75	-1	-12	-99	45	-91	-50	-321	-120
1980	75	-37	-8	-12	-67	277	-97	182	-123	-41
1981	-188	-24	2	-17	-267	502	-104	157	-406	-32
1982	-194	34	137	-6	-463	500	-110	143	-392	-37
1983	-328	52	143	-8	-465	332	-111	226	-451	-45
1984	-203	43	155	-9	-145	215	-118	233	-498	-79
1985	-439	68	111	-1	-299	144	-125	243	-521	-59
1986	-498	61	115	1	-296	90	-115	321	-602	-73
1987	-952	-10	118	-5	-599	47	-107	232	-556	-72

1988	-968	-96	66	-11	-542	15	-110	291	-539	-41
1989	-1096	-47	-16	-9	-692	181	-107	178	-564	-37
1990	-1419	-228	-11	-10	-992	64	-89	268	-394	-28

Table 2.23 PRODUCTIVITY IN MONTENEGRO: ALLOCATION EFFECT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965.	-85	6	-17	12	-40	21	-37	9	-39	1
1966.	-55	14	-28	9	-24	7	-39	14	-19	12
1967.	-89	13	-42	8	-24	7	-39	15	-28	-1
1968.	-129	13	-31	1	-41	10	-47	17	-54	2
1969.	-85	21	-14	1	-64	17	-41	18	-26	4
1970.	-35	17	-17	5	-33	22	-38	23	-17	3
1971.	18	33	-16	5	1	16	-39	17	-3	4
1972.	43	37	-2	9	19	28	-45	12	2	-17
1973.	33	35	-3	8	34	9	-61	8	2	-1
1974.	19	38	-14	7	29	1	-61	6	2	10
1975.	20	28	-7	5	72	2	-66	11	0	-24
1976.	10	32	-8	0	62	-5	-49	8	-4	-26
1977.	-14	40	-12	-2	29	2	-33	6	-15	-29
1978.	-52	35	-6	-6	19	-4	-31	7	-44	-21
1979.	-183	42	1	-17	21	-2	-31	-20	-39	-136
1980.	8	21	6	-14	15	6	-35	71	-16	-46
1981.	-61	14	-2	-20	56	-30	-40	61	-61	-39
1982.	-186	-19	-133	-7	95	-22	-43	50	-65	-43
1983.	-201	-28	-140	-8	97	-31	-42	91	-86	-55
1984.	-337	-23	-152	-9	31	-28	-45	90	-87	-113
1985.	-242	-38	-109	-1	61	-16	-52	96	-113	-70
1986.	-218	-30	-112	1	64	-5	-32	128	-142	-90
1987.	-149	4	-116	-4	123	-4	-25	84	-119	-92
1988.	-55	34	-64	-11	105	-3	-27	107	-146	-49
1989.	-2	16	13	-10	110	-47	16	72	-130	-43
1990.	171	-23	10	-10	130	-12	36	90,	-120	-31

Table 2.24 PRODUCTIVITY IN MONTENEGRO:
TYPES OF ALLOCATION EFFECT

Year.	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	2	3	4	3	4	1	4	3	4
1966	2	3	4	3	4	1	4	3	4
1967	2	3	4	3	4	1	4	3	1
1968	2	3	4	3	4	1	4	3	4
1969	2	3	4	3	4	1	4	3	4
1970	2	3	4	3	4	1	4	3	4
1971	2	3	4	2	4	1	4	3	4
1972	2	3	4	2	4	1	4	2	1
1973	2	3	4	2	4	1	4	2	1
1974	2	3	4	2	4	1	4	2	4
1975	2	3	4	2	4	1	4	2	1
1976	2	3	4	2	3	1	4	1	1
1977	2	3	1	2	4	1	4	1	1
1978	2	3	1	2	3	1	4	1	1
1979	2	2	1	2	3	1	1	1	1
1980	2	2	1	2	3	1	4	1	1
1981	2	3	1	2	3	1	4	1	1
1982	3	3	1	2	3	1	4	1	1
1983	3	3	1	2	3	1	4	1	1
1984	3	3	1	2	3	1	4	1	1
1985	3	3	1	2	3	1	4	1	1
1986	3	3	4	2	3	1	4	1	1
1987	2	3	1	2	3	1	4	1	1
1988	2	3	1	2	3	1	4	1	1
1989	2	2	1	2	3	2	4	1	1
1990	1	2	1	2	3	2	4	1	1

During 22 (1965-1978 and 1981-1990) of the 26 surveyed years, the Montenegrin water management sector's differential shift was positive, which in 21 years resulted in the sector's real GDP being higher than hypothetical (the only time that it was smaller was in 1979, 1980, and 1981).

Compared to its counterpart at the level of Yugoslavia, in ten years of the surveyed period the effects of relatively higher labor productivity in Montenegro's water

management sector exceeded the influence of the negative structural shift (i.e. lower productivity in this republic's sector relative to the average at the level of Yugoslavia).

Trade is an example of a sector in which relatively declining productivity (with a negative differential shift starting in 1972) caused a continuous diminishing of real GDP relative to hypothetical. The sector's real GDP in 1965 was by 61% bigger, while in 1989 it was 24.1% smaller than hypothetical. Since the structural shift was positive in all of the years in the surveyed period (trade had above-average productivity throughout the surveyed period), this unfavorable trend may be ascribed to a continuous relative drop in labor productivity in Montenegro's trade sector compared to the average Yugoslav productivity in trade. In 1988, for example, this sector in Montenegro lost almost two-thirds of its GDP (64.9%).

Construction was the only sector in Montenegro's economy to have a positive differential shift in every year of the surveyed period. However, its structural shift was negative during the entire period (construction was the one sector that on the level of Yugoslavia constantly had below-average productivity) and, therefore, the real GDP exceeded hypothetical GDP (which is to say that the positive differential shift was higher than the negative structural shift) for eleven years (1965-1970, 1972 and 1980-1983).

Real GDP exceeded hypothetical in the manufacturing and catering and tourism sectors for only four years (1965-1966 and 1968-1969), while in agriculture the same situation happened during six years (1982-1987).

As in all of the observed years both the structural and differential shifts were negative in the forestry and artisanship sectors in Montenegro, their real GDP was below hypothetical, that is, from the value that the two sectors' employees would have achieved had their productivity been equal to the Yugoslav average.

As expected from analyzing the structural and differential shifts, transport and communication in all of these years (except in 1979) was characterized by the best type of allocation effect (Type 4). In 1979, however, this sector was of the Type 1 allocation effect, because its share in the number of employed remained unchanged, while their productivity went down relatively (*Table 2.24*).

Montenegro's construction sector consistently showed higher productivity than the Yugoslav average, but the republic's specialization in it in the 1965-1975 period (Type 4 allocation effect) was followed by a relative drop in the number of employed from 1976 to 1988 (Type 3 allocation effect). The exception was 1977, when the Montenegrin economy again specialized in this sector (Type 4 allocation effect).

In the four years (1979, 1980, 1989 and 1990) that labor productivity in Montenegro's water management sector was below the Yugoslav average, this sector was characterized by the Type 2 allocation effect. In all the other years, the sector was comparatively good, but unspecialized in (Type 3 allocation effect).

In forestry and catering and tourism, a continuous above-average share in the number of employed in thirteen, i.e. seven years, respectively, was accompanied by above-average productivity as well. During these years (1965-1976 and 1986 in for-

estry and 1965-1966, 1968-1971 and 1974 in catering and tourism) were marked by the Type 4 allocation effect. In the other years these sectors were characterized by the worst type of allocation effect – Type 1 – indicating specialization in a comparatively bad sector.

As expected, agriculture in Montenegro was characterized by below-average share in employment in the entire surveyed period, with productivity exceeding the corresponding average at the level of Yugoslavia in only five years (1982-1986). This means that during this time Montenegro's agriculture was marked by the Type 3 allocation effect while in the remainder, except in 1990 when it was Type 1, it was a Type 3 sector.

Montenegro's manufacturing also had no above-average share in the number of employed. In the first six years of the surveyed period (1965-1970), Montenegro's workers in the manufacturing achieved a higher productivity than the Yugoslav average (Type 3 allocation effect), whereas in the remaining years their production was lower and characterized by the Type 2 allocation effect.

Much like the manufacturing in Bosnia and Herzegovina, Montenegro's trade is an example of poor orientation: in the first seven years, this sector performed comparatively well, but was not a sector that Montenegro specialized in (Type 3 allocation effect). In the next four years the productivity of the sector's employees was below the Yugoslav average, with the sector remaining unspecialized in (Type 2 allocation effect). In the last 15 years, however, the number of employees in trade went up relatively, making its share in the employment structure above average, while the sector's productivity remained below the Yugoslav average. In this way Montenegro specialized in a comparatively bad sector (Type 1 allocation effect).

In the case of artisanship, this worst combination characterized the entire surveyed period.

Croatia

Table 2.25 shows GDP trends by sector in the Croatian economy, and *Table 2.26* the republic's labor productivity.

The most "productive" year in Croatia's economy was 1979, when a worker contributed 77,000 dinars on average to the republic's GDP. As in the cases of Montenegro and Bosnia and Herzegovina, 1965 was the year of the lowest productivity in Croatia as well. During this time, one worker produced 45,000 dinars on average of the republic's GDP.

Trade appeared as the most productive sector on average throughout the surveyed period: employees contributed 94,000 each on average to the sector's GDP. The artisanship sector was at the opposite pole: its employees were the least productive on average, contributing only 29,000 dinars each to their sector's GDP.

Table 2.25 CROATIA: GDP OF THE SOCIAL SECTOR

In 1972 prices

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	33898	1013	74	756	14600	3769	634	4271	7145	1637
1966	35948	1290	95	773	15472	3954	591	4446	7617	1710
1967	37112	1392	102	763	15517	4282	609	4722	8079	1646
1968	39141	1532	112	748	16314	4537	643	5007	8345	1904
1969	42492	1598	117	751	17555	4878	690	5398	9336	2169
1970	46367	1864	137	783	18933	5380	724	5858	10348	2340
1971	50798	2185	160	796	20473	5907	761	6360	11602	2554
1972	53239	2215	163	813	21838	5849	814	6525	12355	2668
1973	54397	2307	169	832	22346	5369	855	7001	12788	2730
1974	59539	2730	200	870	24859	5594	914	7700	13903	2768
1975	61754	2279	167	893	26227	6330	1231	7700	14107	2820
1976	64068	2651	195	878	27057	7014	1292	7854	14326	2801
1977	69711	2892	208	959	29695	7715	1381	8357	15504	3000
1978	75758	3019	208	947	31978	8595	1486	9191	17150	3185
1979	80147	3312	187	985	34098	9492	1491	9540	17648	3395
1980	81763	3108	163	953	34709	9149	1628	11050	17490	3513
1981	82561	3325	166	1001	35944	8966	1669	10873	17019	3598
1982	80811	3491	166	1088	34987	7971	1797	10438	17189	3684
1983	79417	3694	171	1105	34378	7302	1804	10574	16605	3784
1984	81596	4149	171	1149	36133	6951	1840	10962	16190	4051
1985	82690	4102	185	1139	36842	6742	1925	11351	16028	4376
1986	84864	4410	188	1151	38535	6402	1513	12064	16475	4126
1987	84629	4205	192	1204	39200	5845	1356	13113	15565	3949
1988	84084	4232	190	1226	38640	5680	1333	13627	14896	4260
1989	81933	4419	181	1201	38476	5519	1340	12984	14842	2971
1990	73751	4303	172	1047	34014	4850	963	12332	13337	2733

Table 2.26 CROATIA: LABOR PRODUCTIVITY

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	0,045	0,023	0,017	0,032	0,041	0,039	0,017	0,048	0,090	0,054
1966	0,050	0,031	0,024	0,037	0,045	0,046	0,018	0,053	0,097	0,057
1967	0,052	0,039	0,023	0,042	0,046	0,050	0,019	0,057	0,100	0,052
1968	0,055	0,044	0,030	0,046	0,049	0,050	0,020	0,059	0,102	0,060
1969	0,059	0,050	0,032	0,048	0,052	0,053	0,021	0,062	0,107	0,065
1970	0,062	0,058	0,037	0,051	0,054	0,056	0,022	0,065	0,111	0,063
1971	0,065	0,071	0,039	0,051	0,057	0,060	0,022	0,069	0,117	0,062
1972	0,066	0,070	0,038	0,055	0,058	0,058	0,024	0,069	0,117	0,060
1973	0,067	0,073	0,040	0,058	0,058	0,055	0,026	0,074	0,117	0,056
1974	0,070	0,083	0,045	0,060	0,062	0,055	0,028	0,079	0,122	0,053
1975	0,069	0,064	0,037	0,058	0,063	0,057	0,037	0,074	0,119	0,053
1976	0,070	0,073	0,041	0,059	0,063	0,061	0,038	0,074	0,115	0,050
1977	0,072	0,074	0,041	0,063	0,065	0,064	0,043	0,075	0,122	0,050
1978	0,076	0,076	0,036	0,064	0,069	0,066	0,039	0,082	0,128	0,051
1979	0,077	0,082	0,033	0,067	0,071	0,068	0,037	0,084	0,124	0,051
1980	0,076	0,075	0,029	0,064	0,071	0,063	0,038	0,094	0,117	0,051
1981	0,075	0,077	0,027	0,066	0,071	0,062	0,038	0,091	0,112	0,050
1982	0,072	0,076	0,027	0,068	0,068	0,056	0,039	0,086	0,112	0,050
1983	0,070	0,076	0,028	0,069	0,066	0,054	0,038	0,088	0,107	0,051
1984	0,071	0,081	0,027	0,072	0,068	0,051	0,038	0,090	0,104	0,052
1985	0,071	0,077	0,028	0,070	0,068	0,049	0,039	0,091	0,102	0,054
1986	0,071	0,084	0,028	0,070	0,069	0,047	0,030	0,095	0,103	0,049
1987	0,070	0,078	0,027	0,073	0,069	0,042	0,027	0,102	0,095	0,046
1988	0,070	0,077	0,029	0,074	0,068	0,042	0,028	0,106	0,090	0,049
1989	0,068	0,082	0,028	0,076	0,068	0,043	0,030	0,102	0,089	0,035
1990	0,064	0,080	0,028	0,070	0,061	0,041	0,028	0,099	0,083	0,035

Table 2.27 PRODUCTIVITY IN CROATIA: HYPOTHETICAL GDP

In 1972 prices

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965.	32366	1866	191	1008	15128	4109	1562	3795	3404	1302
1966.	34645	1985	194	995	16445	4133	1621	4051	3776	1446
1967.	35363	1801	224	895	16827	4292	1591	4148	4016	1569
1968.	37101	1820	193	853	17449	4729	1666	4434	4301	1656
1969.	40067	1788	200	867	18773	5120	1825	4817	4818	1858
1970.	43195	1848	216	894	20064	5532	1941	5207	5364	2129
1971.	46733	1857	248	934	21676	5961	2081	5526	5960	2488
1972.	49042	1930	260	905	22933	6128	2060	5731	6391	2706
1973.	50664	1959	262	888	23795	6076	2007	5890	6772	3016
1974.	54877	2133	288	936	25765	6623	2071	6319	7360	3381
1975.	57215	2291	290	981	26809	7068	2112	6691	7572	3400
1976.	58939	2341	306	953	27545	7339	2168	6760	7959	3568
1977.	64443	2605	341	1014	30384	8087	2136	7402	8497	3977
1978.	70133	2772	401	1042	32481	9155	2689	7841	9377	4376
1979.	74964	2904	404	1065	34436	10084	2907	8156	10263	4743
1980.	76732	2962	397	1062	35011	10336	3038	8373	10661	4892
1981.	77498	3033	432	1068	35515	10236	3080	8386	10705	5043
1982.	76924	3175	426	1107	35479	9712	3134	8310	10564	5017
1983.	75184	3237	414	1068	34916	9103	3170	8015	10351	4912
1984.	77071	3448	423	1073	35845	9205	3234	8185	10459	5199
1985.	77434	3551	438	1075	35863	9178	3272	8282	10446	5329
1986.	79287	3506	452	1089	37156	9078	3380	8461	10606	5559
1987.	78501	3478	452	1073	36962	8985	3219	8300	10537	5495
1988.	76903	3484	420	1055	36071	8639	3026	8150	10547	5512
1989.	76523	3461	411	1015	36248	7198	2883	8172	10628	5506
1990.	68999	3240	364	901	33601	7104	2053	7481	9568	4687

Table 2.28 PRODUCTIVITY IN CROATIA: STRUCTURAL SHIFT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	271	-584	16	-334	-1573	-400	-837	361	3445	177
1966	90	-366	14	-320	-1689	-442	-910	212	3499	92
1967	116	-218	-24	-247	-2129	-326	-906	289	3735	-58
1968	117	-197	13	-244	-2107	-466	-928	235	3782	30
1969	206	-112	4	-295	-2228	-626	-1044	246	4236	26
1970	282	-245	-22	-290	-2358	-650	-1111	323	4721	-85
1971	187	25	-7	-328	-2533	-1020	-1202	333	5186	-269
1972	177	-37	-24	-306	-2477	-1076	-1145	224	5427	-408
1973	185	56	-28	-295	-2529	-1211	-1067	453	5387	-581
1974	206	107	3	-321	-2469	-1464	-1102	669	5595	-812
1975	136	-141	-11	-334	-2114	-1247	-967	417	5377	-844
1976	109	101	10	-312	-2076	-1250	-972	322	5243	-957
1977	121	180	10	-294	-2077	-1423	-1001	192	5733	-1199
1978	101	-12	-37	-329	-2140	-1524	-1348	410	6498	-1418
1979	75	-10	-52	-332	-1891	-1617	-1501	356	6708	-1586
1980	37	-10	-42	-347	-1347	-1894	-1577	468	6484	-1699
1981	-102	-18	-41	-320	-614	-2178	-1585	515	5948	-1809
1982	-123	245	-38	-291	-825	-2411	-1540	317	6129	-1708
1983	-122	229	-31	-258	-241	-2952	-1547	540	5753	-1615
1984	-368	441	-55	-243	352	-3217	-1580	682	5078	-1825
1985	-463	179	-50	-251	460	-3182	-1548	879	4872	-1821
1986	-652	394	-49	-261	439	-3198	-1833	1096	5003	-2244
1987	-640	338	-36	-241	616	-3025	-1843	1694	4237	-2381
1988	-632	367	-21	-195	848	-3036	-1731	1770	3697	-2332
1989	-761	460	-34	-193	947	-2785	-1610	1783	3557	-2885
1990	-233	630	-1	-206	-59	-2405	-1053	1855	330	-2294

Table 2.29 PRODUCTIVITY IN CROATIA: DIFFERENTIAL SHIFT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	1262	-269	-133	83	1045	60	-92	114	296	158
1966	1213	-330	-113	98	716	263	-120	183	342	172
1967	1633	-191	-98	114	820	316	-77	285	328	136
1968	1922	-91	-94	139	972	273	-95	337	261	219
1969	2219	-78	-87	179	1009	384	-91	335	282	285
1970	2890	261	-57	179	1228	497	-105	328	263	296
1971	3878	303	-82	190	1330	966	-119	500	455	335
1972	4020	322	-72	214	1382	797	-101	571	537	369
1973	3548	293	-65	239	1079	505	-85	658	629	295
1974	4455	490	-91	255	1563	435	-56	712	948	199
1975	4404	129	-113	246	1532	509	87	592	1158	264
1976	5020	209	-121	237	1588	925	96	772	1124	190
1977	5148	107	-143	238	1389	1051	246	762	1273	223
1978	5523	259	-157	234	1637	964	145	939	1274	227
1979	5109	417	-165	253	1553	1024	84	1028	677	238
1980	4994	155	-192	238	1044	707	167	2209	345	320
1981	5165	310	-224	253	1043	908	174	1972	366	363
1982	4010	71	-222	273	333	671	203	1812	496	375
1983	4355	228	-212	296	-297	1152	181	2019	502	487
1984	4892	260	-197	319	-64	963	187	2095	653	676
1985	5718	372	-203	315	518	746	201	2189	710	868
1986	6229	509	-215	323	939	521	-34	2508	866	812
1987	6767	389	-225	372	1622	-115	-21	3119	792	835
1988	7814	381	-209	366	1721	76	38	3707	653	1080
1989	6171	499	-197	380	1281	106	67	3029	657	349
1990	4985	433	-190	353	472	150	-37	2996	469	340

Table 2.30 PRODUCTIVITY IN CROATIA:
RATIO OF HYPOTHETICAL AND REAL GDP

In %

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	95.5	184.3	258.0	133.3	103.6	109.0	246.5	88.9	47.6	79.5
1966	96.4	153.9	204.5	128.7	106.3	104.5	274.3	91.1	49.6	84.5
1967	95.3	129.4	219.7	117.4	108.4	100.2	261.4	87.9	49.7	95.3
1968	94.8	118.8	172.5	114.1	107.0	104.2	259.2	88.6	51.5	86.9
1969	94.3	111.9	171.3	115.5	106.9	105.0	264.5	89.2	51.6	85.7
1970	93.2	99.1	157.4	114.2	106.0	102.8	268.0	88.9	51.8	91.0
1971	92.0	85.0	155.3	117.4	105.9	100.9	273.5	86.9	51.4	97.4
1972	92.1	87.1	159.3	111.3	105.0	104.8	253.1	87.8	51.7	101.5
1973	93.1	84.9	155.2	106.7	106.5	113.2	234.6	84.1	53.0	110.5
1974	92.2	78.2	144.0	107.6	103.6	118.4	226.7	82.1	52.9	122.1
1975	92.6	100.5	173.8	109.9	102.2	111.7	171.6	86.9	53.7	120.6
1976	92.0	88.3	156.9	108.5	101.8	104.6	167.8	86.1	55.6	127.4
1977	92.4	90.1	163.9	105.8	102.3	104.8	154.7	88.6	54.8	132.5
1978	92.6	91.8	193.0	110.0	101.6	106.5	181.0	85.3	54.7	137.4
1979	93.5	87.7	215.9	108.1	101.0	106.2	195.0	85.5	58.2	139.7
1980	93.8	95.3	243.4	111.4	100.9	113.0	186.6	75.8	61.0	139.2
1981	93.9	91.2	260.1	106.7	98.8	114.2	184.5	77.1	62.9	140.2
1982	95.2	91.0	256.7	101.7	101.4	121.8	174.4	79.6	61.5	136.2
1983	94.7	87.6	242.0	96.6	101.6	124.7	175.7	75.8	62.3	129.8
1984	94.5	83.1	247.2	93.4	99.2	132.4	175.7	74.7	64.6	128.3
1985	93.6	86.6	236.8	94.4	97.3	136.1	170.0	73.0	65.2	121.8
1986	93.4	79.5	240.2	94.6	96.4	141.8	223.4	70.1	64.4	134.7
1987	92.8	82.7	235.7	89.1	94.3	153.7	237.4	63.3	67.7	139.1
1988	91.5	82.3	220.8	86.1	93.4	152.1	227.0	59.8	70.8	129.4
1989	93.4	78.3	227.2	84.5	94.2	148.5	215.2	62.9	71.6	185.3
1990	93.6	75.3	211.4	86.0	98.8	146.5	213.2	60.7	71.7	171.5

Table 2.31 PRODUCTIVITY IN CROATIA:
RATIO OF STRUCTURAL SHIFT AND REAL GDP

In %

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	0.8	-57.7	21.4	-44.2	-10.8	-10.6	-132.1	8.5	48.2	10.8
1966	0.3	-28.4	14.5	-41.4	-10.9	-11.2	-154.0	4.8	45.9	5.4
1967	0.3	-15.7	-23.2	-32.3	-13.7	-7.6	-148.7	6.1	46.2	-3.5
1968	0.3	-12.8	11.2	-32.6	-12.9	-10.3	-144.5	4.7	45.3	1.6
1969	0.5	-7.0	3.0	-39.3	-12.7	-12.8	-151.3	4.6	45.4	1.2
1970	0.6	-13.2	-15.9	-37.1	-12.5	-12.1	-153.5	5.5	45.6	-3.6
1971	0.4	1.2	-4.1	-41.2	-12.4	-17.3	-157.9	5.2	44.7	-10.5
1972	0.3	-1.7	-14.9	-37.7	-11.3	-18.4	-140.7	3.4	43.9	-15.3
1973	0.3	2.4	-16.8	-35.4	-11.3	-22.6	-124.7	6.5	42.1	-21.3
1974	0.3	3.9	1.4	-36.9	-9.9	-26.2	-120.6	8.7	40.2	-29.3
1975	0.2	-6.2	-6.4	-37.4	-8.1	-19.7	-78.6	5.4	38.1	-29.9
1976	0.2	3.8	5.1	-35.5	-7.7	-17.8	-75.2	4.1	36.6	-34.1
1977	0.2	6.2	4.8	-30.6	-7.0	-18.4	-72.5	2.3	37.0	-40.0
1978	0.1	-0.4	-17.6	-34.8	-6.7	-17.7	-90.7	4.5	37.9	-44.5
1979	0.1	-0.3	-27.6	-33.8	-5.5	-17.0	-100.7	3.7	38.0	-46.7
1980	0.0	-0.3	-25.7	-36.4	-3.9	-20.7	-96.9	4.2	37.1	-48.4
1981	-0.1	-0.5	-25.0	-32.0	-1.7	-24.3	-95.0	4.7	34.9	-50.3
1982	-0.2	7.0	-22.8	-26.8	-2.4	-30.3	-85.7	3.0	35.7	-46.4
1983	-0.2	6.2	-18.2	-23.4	-0.7	-40.4	-85.7	5.1	34.6	-42.7
1984	-0.5	10.6	-32.2	-21.2	1.0	-46.3	-85.9	6.2	31.4	-45.0
1985	-0.6	4.4	-27.3	-22.1	1.2	-47.2	-80.4	7.7	30.4	-41.6
1986	-0.8	8.9	-25.9	-22.7	1.1	-49.9	-121.1	9.1	30.4	-54.4
1987	-0.8	8.0	-18.7	-20.0	1.6	-51.8	-135.9	12.9	27.2	-60.3
1988	-0.8	8.7	-10.9	-15.9	2.2	-53.4	-129.8	13.0	24.8	-54.7
1989	-0.9	10.4	-18.6	-16.1	2.5	-50.5	-120.2	13.7	24.0	-97.1
1990	-0.3	14.6	-0.9	-19.7	-0.2	-49.6	-109.4	15.0	24.7	-83.9

Table 2.32 PRODUCTIVITY IN CROATIA:
RATIO OF DIFFERENTIAL SHIFT AND GDP

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	3.7	-26.6	-179.5	10.9	7.2	1.6	-14.5	2.7	4.1	9.7
1966	3.4	-25.6	-119.0	12.7	4.6	6.7	-20.3	4.1	4.5	10.1
1967	4.4	-13.7	-96.5	15.0	5.3	7.4	-12.7	6.0	4.1	8.3
1968	4.9	-5.9	-83.7	18.5	6.0	6.0	-14.8	6.7	3.1	11.5
1969	5.2	-4.9	-74.4	23.9	5.8	7.9	-13.2	6.2	3.0	13.1
1970	6.2	14.0	-41.5	22.9	6.5	9.2	-14.6	5.6	2.5	12.7
1971	7.6	13.9	-51.2	23.8	6.5	16.4	-15.6	7.9	3.9	13.1
1972	7.6	14.5	-44.4	26.4	6.3	13.6	-12.4	8.7	4.3	13.8
1973	6.5	12.7	-38.3	28.7	4.8	9.4	-9.9	9.4	4.9	10.8
1974	7.5	17.9	-45.4	29.3	6.3	7.8	-6.1	9.3	6.8	7.2
1975	7.1	5.7	-67.4	27.5	5.8	8.0	7.0	7.7	8.2	9.4
1976	7.8	7.9	-62.0	27.0	5.9	13.2	7.4	9.8	7.8	6.8
1977	7.4	3.7	-68.7	24.8	4.7	13.6	17.8	9.1	8.2	7.4
1978	7.3	8.6	-75.4	24.7	5.1	11.2	9.8	10.2	7.4	7.1
1979	6.4	12.6	-88.2	25.6	4.6	10.8	5.7	10.8	3.8	7.0
1980	6.1	5.0	-117.7	25.0	3.0	7.7	10.3	20.0	2.0	9.1
1981	6.3	9.3	-135.1	25.3	2.9	10.1	10.4	18.1	2.2	10.1
1982	5.0	2.0	-133.9	25.1	1.0	8.4	11.3	17.4	2.9	10.2
1983	5.5	6.2	-123.8	26.7	-0.9	15.8	10.0	19.1	3.0	12.9
1984	6.0	6.3	-115.0	27.8	-0.2	13.9	10.1	19.1	4.0	16.7
1985	6.9	9.1	-109.5	27.7	1.4	11.1	10.5	19.3	4.4	19.8
1986	7.3	11.6	-114.3	28.1	2.4	8.1	-2.3	20.8	5.3	19.7
1987	8.0	9.2	-117.0	30.9	4.1	-2.0	-1.5	23.8	5.1	21.1
1988	9.3	9.0	-109.9	29.9	4.5	1.3	2.8	27.2	4.4	25.4
1989	7.5	11.3	-108.6	31.6	3.3	1.9	5.0	23.3	4.4	11.8
1990	6.8	10.1	-110.5	33.7	1.4	3.1	-3.9	24.3	3.5	12.4

The Croatian economy's GDP in every year of the surveyed period was higher than hypothetical. The gains achieved by the economy owing to above-average productivity ranged from 3.6% in 1966 to 8.5% in 1988. The data in Table 2.30 in the TOT column shows a mild tendency toward increasing gains in GDP related to this, despite the negative influence of the structural component in the final years of the surveyed period (the structural shift was negative from 1981 to 1990 – Table 2.31). This was

the result of an increased positive difference between the sectoral productivity of the Croatian economy and the sectoral productivity of Yugoslavia. The relative differential shift (which was positive throughout these years) ranged from 3.4% in 1966, and 9.3% in 1988 of the achieved GDP and was equal to the minimal and maximal gains in GDP based on the relatively higher sectoral efficiency of the republic's economy (*Table 2.32*).

In the two sectors – transport and communication and trade – which in the entire period had above-average productivity and a positive structural shift, Croatia's economy also saw a positive differential shift, i.e. above-average productivity. Consequently, both sectors' real GDP exceeded hypothetical in all of the analyzed years.

In the case of transport and communication, the trend was upward: in 1966 the sector's real GDP was by one-tenth above hypothetical GDP, which it surpassed in 1988 by as much as 40.2%. Trade, on its part, followed a downward trend: the sector's real GDP in 1965 was by over one-half (52.4%) above hypothetical, only to be reduced in 1988 to just 29.2%.

Forestry and catering and tourism showed higher productivity than the Yugoslav average throughout the surveyed period (a positive differential shift), but it proved insufficient in annulling the negative effect of the structural shift. This was the case with catering and tourism in the first seven years, while the same situation characterized forestry in the final eight years of the analyzed period.

Agriculture's GDP was below hypothetical in the first five years (1965-1969), as a result of the cumulative effect of negative structural and differential shifts. In other years, however, the above-average productivity in Croatia's agriculture resulted in a positive differential shift which, combined with a positive structural shift lasting 12 years (1971, 1973-1974, 1976-1977, and 1982-1990), i.e. exceeding the negative structural shift for seven years (1970, 1972, 1975 and 1978-1981), provided for a real GDP higher than hypothetical.

Although the manufacturing's differential shift was negative in only two years (1983 and 1984), the sector's real GDP exceeded hypothetical only in the final five years (1984-1990), when its structural shift was positive (except in 1990).

GDP of water management, construction and artisanship was below hypothetical in all of the surveyed years. In the case of construction, the reason lied in the structural shift's negative effects (in terms of Yugoslavia as a whole, construction appeared as a below-average production sector in the entire surveyed period), which were higher than the positive influence of relatively higher labor productivity in construction at the level of Yugoslavia (the differential shift was negative only in 1987). Given that, much like construction, it was in the category of below-average productive sectors, artisanship, too, had a negative structural shift, which in one half of the surveyed period (1965-1974, 1986-1987, and in 1990), was combined with a negative differential shift. When it comes to water management, the responsibility for its continuously smaller real GDP than hypothetical was in the relatively low sectoral productivity of its employees, which was below the Yugoslav average in the entire surveyed period.

Table 2.33 PRODUCTIVITY IN CROATIA: NET DIFFERENTIAL SHIFT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	1266	-333	-79	75	1109	61	-80	90	292	130
1966	1156	-404	-84	93	734	286	-108	150	344	146
1967	1569	-245	-77	110	840	338	-71	236	326	112
1968	1884	-112	-71	139	1003	290	-85	282	260	179
1969	2174	-100	-71	189	1045	415	-81	274	275	227
1970	2948	328	-46	186	1283	539	-93	267	256	229
1971	3954	389	-64	198	1397	1035	-104	413	443	248
1972	4054	404	-58	231	1452	848	-91	475	523	269
1973	3541	369	-55	263	1139	535	-77	548	612	207
1974	4534	610	-68	280	1657	462	-52	586	921	138
1975	4386	155	-82	263	1625	539	81	478	1137	190
1976	5034	248	-86	252	1686	984	90	636	1088	137
1977	5147	120	-106	246	1461	1130	263	626	1243	162
1978	5503	293	-112	242	1744	1022	141	780	1229	165
1979	5101	473	-124	259	1665	1073	81	857	646	171
1980	4689	174	-146	241	1124	742	160	1836	328	229
1981	4931	350	-159	256	1126	943	166	1641	349	258
1982	3685	77	-159	268	361	702	189	1507	473	266
1983	3952	245	-153	290	-322	1208	165	1693	479	348
1984	4403	274	-145	316	-70	990	169	1759	629	480
1985	5168	382	-142	312	572	750	180	1828	685	601
1986	5719	542	-147	317	1036	525	-30	2089	836	550
1987	6187	415	-152	360	1801	-113	-18	2572	759	564
1988	7064	401	-147	344	1925	73	36	3081	619	731
1989	5707	529	-139	361	1429	102	65	2506	621	233
1990	4422	450	-131	340	520	147	-40	2462	442	232

Table 2.34 PRODUCTIVITY IN CROATIA: ALLOCATION EFFECT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-4	64	-54	7	-65	-1	-12	24	4	28
1966	56	74	-29	6	-18	-22	-12	33	-2	26
1967	64	54	-22	4	-21	-21	-6	48	2	24
1968	39	21	-22	-0	-31	-17	-10	56	2	40
1969	45	22	-16	-10	-35	-31	-10	61	7	58
1970	-57	-67	-10	-7	-55	-42	-12	61	8	68
1971	-76	-86	-18	-8	-67	-69	-14	87	12	87
1972	-34	-82	-15	-16	-70	-51	-10	96	14	99
1973	7	-77	-10	-24	-60	-30	-7	110	18	88
1974	-78	-121	-23	-26	-94	-26	-3	126	27	61
1975	18	-26	-30	-17	-93	-30	5	114	21	74
1976	-14	-39	-35	-15	-98	-59	6	137	36	53
1977	1	-13	-37	-8	-73	-79	-16	136	31	60
1978	21	-34	-45	-7	-107	-58	5	159	45	62
1979	8	-56	-41	-6	-111	-49	3	171	31	67
1980	305	-20	-46	-3	-79	-34	7	373	17	91
1981	234	-40	-65	-3	-83	-35	8	331	17	105
1982	325	-7	-63	5	-27	-32	14	305	22	108
1983	403	-17	-58	6	25	-56	16	326	22	140
1984	490	-14	-52	3	6	-27	17	336	23	196
1985	550	-10	-61	3	-54	-4	22	362	25	268
1986	511	-33	-68	6	-97	-4	-4	419	29	262
1987	581	-26	-72	11	-179	-2	-2	546	33	271
1988	750	-20	-62	22	-204	4	2	626	34	349
1989	464	-30	-57	19	-147	4	2	522	36	116
1990	563	-17	-59	13	-48	4	2	535	27	108

Table 2.35 PRODUCTIVITY IN CROATIA: TYPES OF ALLOCATION EFFECT

Year.	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	2	1	4	3	3	1	4	4	4
1966	2	1	4	3	3	1	4	3	4
1967	2	1	4	3	3	1	4	4	4
1968	2	1	3	3	3	1	4	4	4
1969	2	1	3	3	3	1	4	4	4
1970	3	1	3	3	3	1	4	4	4
1971	3	1	3	3	3	1	4	4	4
1972	3	1	3	3	3	1	4	4	4
1973	3	1	3	3	3	1	4	4	4
1974.	3	1	3	3	3	1	4	4	4
1975.	3	1	3	3	3	4	4	4	4
1976	3	1	3	3	3	4	4	4	4
1977	3	1	3	3	3	4	4	4	4
1978	3	1	3	3	3	4	4	4	4
1979	3	1	3	3	3	4	4	4	4
1980	3	1	3	3	3	4	4	4	4
1981	3	1	3	3	3	4	4	4	4
1982	3	1	4	3	3	4	4	4	4
1983	3	1	4	2	3	4	4	4	4
1984	3	1	4	2	3	4	4	4	4
1985	3	1	4	3	3	4	4	4	4
1986	3	1	4	3	3	4	4	4	4
1987	3	1	4	3	1	1	4	4	4
1988	3	1	4	3	4	4	4	4	4
1989	3	1	4	3	4	4	4	4	4
1990	3	1	4	3	4	2	4	4	4

In view of the structural shift's prevalently positive influence on Croatia's GDP, a greater number of specialized and comparatively good sectors in this republic was expected. This is also confirmed by the results shown in *Table 2.35*.

Transport and communication, trade and catering and tourism were in all of the surveyed years characterized by the Type 4 allocation effect (the only exception was the year 1966, when trade was of the Type 3 allocation effect).

Forestry, which was also characterized by above-average productivity, was of the Type 4 allocation effect during 16 years, and Type 3 in the remaining ten.

Macedonia

Table 2.36 shows the Macedonian economy's GDP and *Table 2.37* the productivity of its *social* (non-private, "socialized", socialist) sectors in the period from 1965 to 1990.

The data on the republic's labor productivity shows that the Macedonian economy reached its maximum in the surveyed period in 1979 (similar to the cases of the economies of Bosnia and Herzegovina and Croatia). That year, an employee generated on average 56,000 dinars of GDP. The year in which productivity was at its lowest was 1965 (similar to the situation in the previous three republics), when the average contribution of one worker to the republic's GDP amounted to only 35,000 dinars.

Trade showed the highest average productivity in the surveyed period, with 58,000 dinars per worker. Artisanhip, on the other hand, had the lowest average productivity, with 33,000 dinars per worker.

Despite a continuous positive influence of structure, i.e. the above-average share of relatively productive sectors, Macedonia's real GDP was smaller than hypothetical during the entire surveyed period (*Table 2.41*). This was the direct consequence of a continuously negative differential shift, i.e. lower sectoral productivity in Macedonia compared to Yugoslav average sectoral productivity (*Table 2.43*). In all of the analyzed years and sectors, Macedonia registered only seven positive differential shifts – five in construction (1965, 1983 and 1986-1988), one in forestry (1968) and one in artisanship (1989).

Table 2.36 MACEDONIA: GDP OF THE SOCIAL SECTOR

In 1972 prices

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	6381	462	37	101	2718	909	96	484	1426	148
1966	6949	566	45	103	2849	1025	95	556	1567	142
1967	7221	596	48	102	2933	1029	101	611	1661	140
1968	7629	526	42	100	3240	1055	106	649	1746	164
1969	8529	692	55	100	3573	1171	112	707	1943	176
1970	9373	746	60	104	4038	1223	119	766	2136	181
1971	10227	860	69	106	4399	1272	129	851	2357	185

1972	10774	849	68	107	4727	1271	140	893	2513	207
1973	11434	936	75	111	5225	1159	147	964	2605	212
1974	12360	971	77	116	5847	1130	159	1056	2768	236
1975	12833	1053	84	119	6009	1269	192	1056	2806	244
1976	13653	1221	98	117	6406	1444	202	1078	2817	271
1977	14762	1049	85	128	7205	1581	216	1147	3062	289
1978.	16164	1115	85	126	7962	1695	234	1261	3380	307
1979	17543	1205	89	142	8629	1891	266	1280	3715	326
1980	17801	1258	114	139	9027	1887	242	1177	3619	338
1981	18008	1250	114	150	9333	1774	255	1076	3709	347
1982	18223	1439	112	165	9519	1622	232	1030	3754	350
1983	18094	1249	113	164	9883	1432	232	1031	3660	330
1984	18636	1349	113	191	10556	1304	234	1073	3477	339
1985	18418	1122	131	186	10906	1135	243	1074	3302	319
1986	19551	1390	137	189	11648	1151	241	1130	3365	300
1987	19381	1256	143	184	12010	1013	193	1291	3007	284
1988	18773	1190	144	189	11771	910	220	1201	2881	267
1989	19012	1190	134	192	12136	892	215	1269	2751	233
1990	17029	1073	129	174	11170	790	200	1071	2201	221

Table 2.37 MACEDONIA: LABOR PRODUCTIVITY

In %

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	0,035	0,020	0,032	0,027	0,036	0,028	0,021	0,032	0,065	0,031
1966	0,039	0,027	0,033	0,031	0,037	0,033	0,020	0,038	0,073	0,031
1967	0,040	0,031	0,031	0,033	0,038	0,033	0,021	0,041	0,077	0,031
1968	0,042	0,028	0,027	0,040	0,041	0,033	0,022	0,041	0,077	0,038
1969	0,045	0,037	0,030	0,034	0,044	0,036	0,021	0,045	0,079	0,038
1970	0,048	0,039	0,034	0,038	0,047	0,037	0,021	0,047	0,081	0,037
1971	0,049	0,044	0,043	0,036	0,047	0,038	0,022	0,050	0,085	0,035
1972	0,048	0,039	0,043	0,034	0,046	0,036	0,021	0,049	0,087	0,036
1973	0,050	0,041	0,048	0,035	0,048	0,035	0,022	0,052	0,084	0,035
1974	0,051	0,041	0,046	0,034	0,051	0,034	0,022	0,055	0,083	0,037
1975	0,049	0,041	0,047	0,033	0,050	0,035	0,024	0,052	0,079	0,034

1976	0,051	0,046	0,052	0,032	0,050	0,038	0,025	0,051	0,077	0,037
1977	0,052	0,037	0,038	0,038	0,054	0,036	0,024	0,055	0,082	0,036
1978	0,054	0,038	0,033	0,039	0,057	0,036	0,030	0,059	0,087	0,041
1979	0,056	0,039	0,034	0,044	0,058	0,037	0,033	0,059	0,092	0,040
1980	0,054	0,039	0,043	0,043	0,058	0,034	0,031	0,052	0,087	0,038
1981	0,053	0,037	0,048	0,043	0,057	0,031	0,032	0,048	0,085	0,038
1982	0,051	0,044	0,049	0,046	0,055	0,028	0,031	0,044	0,081	0,037
1983	0,049	0,036	0,051	0,042	0,054	0,025	0,035	0,044	0,076	0,034
1984	0,050	0,037	0,051	0,048	0,056	0,024	0,034	0,045	0,071	0,034
1985	0,048	0,031	0,057	0,044	0,055	0,021	0,034	0,043	0,064	0,033
1986	0,049	0,036	0,055	0,044	0,056	0,022	0,038	0,044	0,064	0,031
1987	0,048	0,031	0,053	0,042	0,056	0,020	0,032	0,051	0,059	0,028
1988	0,047	0,028	0,050	0,042	0,056	0,019	0,039	0,047	0,057	0,026
1989	0,047	0,027	0,048	0,045	0,057	0,019	0,042	0,049	0,054	0,023
1990	0,043	0,028	0,052	0,043	0,054	0,017	0,029	0,041	0,042	0,019

Table 2.38 PRODUCTIVITY IN MACEDONIA: HYPOTHETICAL GDP

In 1972 prices

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	7849	976	50	159	3281	1384	199	654	941	204
1966	8637	1024	65	162	3722	1477	227	706	1036	217
1967	8900	974	77	152	3876	1537	237	747	1076	224
1968	9441	968	81	130	4101	1658	256	826	1191	229
1969	10436	1039	101	165	4546	1802	295	865	1363	259
1970	11299	1098	101	159	4996	1887	324	934	1516	283
1971	12542	1182	97	178	5685	2023	358	1028	1672	320
1972	13548	1321	96	191	6208	2126	399	1107	1755	345
1973	14303	1412	96	199	6685	2061	418	1145	1916	372
1974	15713	1532	108	221	7401	2174	467	1234	2164	413
1975	16601	1624	115	231	7753	2328	508	1308	2272	461
1976	17302	1702	122	234	8133	2431	512	1342	2355	471
1977	19086	1872	151	223	8865	2938	608	1388	2499	543
1978	20826	2033	182	225	9799	3317	546	1499	2706	518
1979	22681	2230	189	234	10730	3685	571	1563	2895	584

1980	23648	2311	191	230	11154	3989	562	1606	2972	632
1981	24157	2376	168	246	11489	4021	565	1589	3058	644
1982	24455	2254	158	247	11939	3918	515	1595	3175	653
1983	24599	2342	147	260	12179	3791	440	1568	3230	641
1984	25252	2455	148	268	12639	3710	463	1597	3307	664
1985	25683	2396	153	279	13120	3551	478	1646	3418	644
1986	26610	2563	166	286	13846	3506	425	1700	3467	651
1987	26128	2631	175	284	13749	3316	388	1629	3303	653
1988	25524	2689	184	286	13445	3039	356	1634	3236	655
1989	25749	2784	180	273	13660	2976	324	1653	3244	654
1990	23670	2284	149	241	12346	2852	418	1572	3107	701

Table 2.39 PRODUCTIVITY IN MACEDONIA: STRUCTURAL SHIFT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	106	-306	4	-53	-341	-135	-107	62	953	28
1966	107	-189	5	-52	-382	-158	-127	37	960	14
1967	134	-118	-8	-42	-490	-117	-135	52	1001	-8
1968	158	-105	5	-37	-495	-163	-143	44	1047	4
1969	198	-65	2	-56	-539	-220	-169	44	1198	4
1970	178	-146	-10	-52	-587	-222	-186	58	1334	-11
1971	217	16	-3	-62	-664	-346	-207	62	1455	-35
1972	117	-25	-9	-65	-671	-373	-222	43	1490	-52
1973	161	40	-10	-66	-710	-411	-222	88	1524	-72
1974	240	77	1	-76	-709	-480	-248	131	1645	-99
1975	142	-100	-4	-78	-611	-411	-233	82	1613	-114
1976	233	73	4	-77	-613	-414	-230	64	1551	-126
1977	219	129	4	-64	-606	-517	-285	36	1686	-164
1978	218	-8	-17	-71	-646	-552	-274	78	1875	-168
1979	185	-7	-24	-73	-589	-591	-295	68	1892	-195
1980	123	-8	-20	-75	-429	-731	-292	90	1807	-220
1981	117	-14	-16	-74	-199	-856	-291	98	1699	-231
1982	272	174	-14	-65	-278	-973	-253	61	1842	-222
1983	254	166	-11	-63	-84	-1229	-215	106	1795	-211
1984	341	314	-19	-61	124	-1296	-226	133	1606	-233

1985	298	121	-18	-65	168	-1231	-226	175	1594	-220
1986	493	288	-18	-68	164	-1235	-230	220	1635	-263
1987	447	256	-14	-64	229	-1116	-222	333	1328	-283
1988	478	283	-9	-53	316	-1068	-204	355	1134	-277
1989	571	370	-15	-52	357	-1011	-181	361	1086	-343
1990	305	444	-1	-55	-22	-966	-214	390	1072	-343

Table 2.40 PRODUCTIVITY IN MACEDONIA: DIFFERENTIAL SHIFT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-1575	-209	-17	-5	-222	-340	3	-232	-468	-84
1966	-1796	-269	-25	-7	-491	-294	-4	-187	-429	-89
1967	-1812	-260	-21	-8	-452	-391	-1	-188	-415	-76
1968	-1969	-338	-45	7	-365	-439	-7	-221	-493	-69
1969	-2104	-282	-48	-8	-434	-411	-14	-203	-617	-86
1970	-2104	-206	-31	-4	-371	-443	-20	-226	-713	-91
1971	-2531	-338	-25	-9	-622	-405	-22	-239	-771	-101
1972	-2892	-447	-19	-19	-811	-482	-38	-257	-733	-86
1973	-3031	-516	-11	-22	-750	-491	-48	-269	-835	-88
1974	-3594	-637	-32	-29	-845	-564	-60	-308	-1041	-78
1975	-3910	-471	-27	-33	-1133	-649	-83	-333	-1079	-102
1976	-3882	-554	-27	-40	-1114	-573	-81	-328	-1089	-74
1977	-4544	-952	-70	-30	-1054	-840	-107	-278	-1122	-90
1978	-4880	-910	-80	-28	-1192	-1070	-39	-317	-1201	-43
1979	-5323	-1018	-75	-19	-1512	-1203	-10	-352	-1072	-63
1980	-5970	-1046	-57	-16	-1697	-1371	-29	-518	-1161	-75
1981	-6266	-1112	-38	-22	-1958	-1391	-19	-611	1049	-66
1982	-6503	-989	-32	-17	-2142	-1323	-30	-625	-1264	-81
1983	-6758	-1259	-23	-33	-2212	-1129	6	-643	-1365	-100
1984	-6957	-1420	-15	-17	-2207	-1110	-3	-657	-1436	-92
1985	-7564	-1395	-4	-28	-2383	-1185	-9	-747	-1710	-105
1986	-7552	-1462	-11	-28	-2362	-1120	46	-790	-1737	-88
1987	-7194	-1631	-18	-37	-1969	-1187	27	-671	-1624	-86
1988	-7229	-1782	-31	-44	-1990	-1061	68	-788	-1489	-111
1989	-7308	-1964	-31	-29	-1880	-1073	72	-745	-1579	-79
1990	-6946	-1656	-19	-12	-1154	-1097	-4	-890	-1977	-137

Table 2.41 PRODUCTIVITY IN MACEDONIA:
RATIO OF HYPOTHETICAL AND REAL GDP

In %

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	123.0	211.5	134.8	157.6	120.7	152.2	208.4	135.2	66.0	138.0
1966	124.3	180.9	145.2	157.4	130.6	144.1	237.6	126.9	66.1	152.9
1967	123.2	163.4	161.0	149.0	132.1	149.3	233.8	122.3	64.8	160.0
1968	123.7	184.2	193.5	129.8	126.6	157.1	241.1	127.3	68.2	139.5
1969	122.4	150.1	184.0	164.5	127.2	154.0	263.7	122.5	70.1	146.9
1970	120.6	147.1	169.1	153.2	123.7	154.3	273.8	121.9	71.0	156.6
1971	122.6	137.4	140.0	167.7	129.2	159.1	277.1	120.8	71.0	173.2
1972	125.8	155.6	141.2	178.3	131.3	167.3	285.9	123.9	69.9	166.8
1973	125.1	150.9	128.5	178.9	127.9	177.8	283.5	118.8	73.6	175.4
1974	127.1	157.7	140.7	190.4	126.6	192.5	293.8	116.8	78.2	174.9
1975	129.4	154.2	137.3	193.8	129.0	183.5	264.3	123.8	81.0	188.8
1976	126.7	139.4	124.0	199.7	127.0	168.4	253.8	124.6	83.6	174.0
1977	129.3	178.5	177.3	173.8	123.0	185.8	281.7	121.1	81.6	187.8
1978	128.8	182.4	214.0	178.4	123.1	195.7	233.7	118.9	80.1	168.8
1979	129.3	185.1	211.9	164.5	124.3	194.8	214.8	122.1	77.9	179.4
1980	132.8	183.7	167.8	165.7	123.6	211.4	232.6	136.4	82.1	187.0
1981	134.1	190.1	147.1	163.8	123.1	226.6	221.7	147.7	82.5	185.7
1982	134.2	156.7	141.1	150.0	125.4	241.5	222.2	154.8	84.6	186.6
1983	135.9	187.5	129.9	158.7	123.2	264.7	189.9	152.1	88.3	194.1
1984	135.5	182.0	130.6	140.5	119.7	284.5	197.8	148.8	95.1	195.9
1985	139.4	213.5	116.5	149.9	120.3	312.8	196.6	153.2	103.5	201.8
1986	136.1	184.4	121.2	151.1	118.9	304.6	176.4	150.5	103.0	216.9
1987	134.8	209.5	122.1	154.6	114.5	327.4	201.0	126.2	109.9	229.9
1988	136.0	226.0	128.0	151.4	114.2	333.9	161.8	136.0	112.3	245.2
1989	135.4	234.0	134.1	142.1	112.6	333.7	150.9	130.3	117.39	280.8
1990	139.0	212.9	115.5	138.7	110.5	361.0	208.9	146.7	141.1	317.2

Table 2.42 PRODUCTIVITY IN MACEDONIA:
RATIO OF STRUCTURAL SHIFT AND REAL GDP

In %

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	1.7	-66.2	11.2	-52.3	-12.6	-14.8	-111.6	12.9	66.8	18.8
1966	1.5	-33.3	10.3	-50.6	-13.4	-15.4	-133.4	6.6	61.3	9.7
1967	1.9	-19.8	-17.0	-41.0	-16.7	-11.4	-133.1	8.5	60.2	-5.9
1968	2.1	-19.9	12.6	-37.1	-15.3	-15.5	-134.4	6.8	60.0	2.5
1969	2.3	-9.4	3.3	-56.1	-15.1	-18.8	-150.9	6.3	61.6	2.1
1970	1.9	-19.5	-17.0	-49.8	-14.5	-18.1	-156.8	7.6	62.4	-6.3
1971	2.1	1.9	-3.7	-58.8	-15.1	-27.2	-160.0	7.3	61.7	-18.7
1972	1.1	-3.0	-13.2	-60.4	-14.2	-29.4	-159.0	4.8	59.3	-25.1
1973	1.4	4.3	-13.9	-59.4	-13.6	-35.4	-150.7	9.1	58.5	-33.8
1974	1.9	7.9	1.4	-65.3	-12.1	-42.5	-156.3	12.4	59.4	-42.0
1975	1.1	-9.5	-5.1	-66.0	-10.2	-32.4	-121.1	7.7	57.5	-46.9
1976	1.7	6.0	4.0	-65.4	-9.6	-28.7	-113.8	5.9	55.1	-46.7
1977	1.5	12.3	5.2	-50.3	-8.4	-32.7	-132.0	3.1	55.0	-56.6
1978.	1.3	-0.8	-19.5	-56.4	-8.1	-32.6	-117.2	6.2	55.5	-54.7
1979	1.1	-0.6	-27.1	-51.4	-6.8	-31.2	-110.9	5.3	50.9	-60.0
1980	0.7	-0.6	-17.7	-54.1	-4.8	-38.7	-120.7	7.6	50.0	-64.9
1981	0.6	-1.1	-14.1	-49.1	-2.1	-48.2	-114.1	9.1	45.8	-66.6
1982	1.5	12.1	-12.5	-39.5	-2.9	-60.0	-109.2	5.9	49.1	-63.5
1983	1.4	13.3	-9.7	-38.4	-0.9	-85.9	-92.6	10.3	49.0	-63.8
1984	1.8	23.3	-17.0	-31.8	1.2	-99.4	-96.7	12.4	46.2	-68.8
1985	1.6	10.8	-13.4	-35.0	1.5	-108.4	-93.1	16.3	48.3	-69.0
1986	2.5	20.7	-13.1	-36.2	1.4	-107.3	-95.6	19.5	48.6	-87.6
1987	2.3	20.4	-9.7	-34.7	1.9	-110.2	-115.0	25.8	44.2	-99.6
1988	2.5	23.8	-6.3	-28.0	2.7	-117.3	-92.5	29.5	39.4	-103.7
1989	3.0	31.1	-11.0	-27.1	2.9	-113.4	-84.3	28.4	39.5	-147.1
1990	1.8	41.4	-0.5	-31.8	-0.2	-122.2	-107.1	36.4	48.7	-155.2

Table 2.43 PRODUCTIVITY IN MACEDONIA:
RATIO OF DIFFERENTIAL SHIFT AND REAL GDP

In %

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-24.7	-45.3	-46.0	-5.3	-8.2	-37.4	3.2	-48.0	-32.8	-56.7
1966	-25.8	-47.6	-55.5	-6.8	-17.2	-28.7	-4.2	-33.6	-27.4	-62.7
1967	-25.1	-43.6	-44.0	-8.0	-15.4	-38.0	-0.8	-30.8	-25.0	-54.1
1968	-25.8	-64.3	-106.1	7.3	-11.3	-41.6	-6.7	-34.0	-28.2	-42.0
1969	-24.7	-40.7	-87.3	-8.5	-12.1	-35.1	-12.8	-28.7	-31.8	-48.9
1970	-22.4	-27.5	-52.0	-3.5	-9.2	-36.2	-17.0	-29.5	-33.4	-50.3
1971	-24.7	-39.3	-36.3	-8.9	-14.1	-31.8	-17.1	-28.1	-32.7	-54.4
1972	-26.8	-52.6	-28.0	-17.9	-17.1	-38.0	-26.9	-28.8	-29.2	-41.7
1973	-26.5	-55.2	-14.5	-19.5	-14.3	-42.4	-32.8	-27.9	-32.1	-41.6
1974	-29.1	-65.6	-42.0	-25.2	-14.4	-49.9	-37.5	-29.2	-37.6	-32.9
1975	-30.5	-44.7	-32.3	-27.9	-18.9	-51.1	-43.2	-31.5	-38.5	-41.9
1976	-28.4	-45.4	-28.0	-34.3	-17.4	-39.7	-40.0	-30.5	-38.6	-27.4
1977	-30.8	-90.8	-82.5	-23.5	-14.6	-53.1	-49.7	-24.2	-36.6	-31.2
1978	-30.2	-81.6	-94.5	-22.0	-15.0	-63.2	-16.6	-25.1	-35.5	-14.1
1979	-30.3	-84.4	-84.8	-13.2	-17.5	-63.6	-3.9	-27.5	-28.8	-19.4
1980	-33.5	-83.1	-50.1	-11.6	-18.8	-72.6	-11.8	-44.0	-32.1	-22.1
1981	-34.8	-89.0	-33.0	-14.7	-21.0	-78.4	-7.6	-56.8	-28.3	-19.1
1982	-35.7	-68.7	-28.6	-10.5	-22.5	-81.6	-13.0	-60.7	-33.7	-23.0
1983	-37.4	-100.8	-20.2	-20.3	-22.4	-78.9	2.8	-62.4	-37.3	-30.3
1984	-37.3	-105.3	-13.6	-8.7	-20.9	-85.1	-1.1	-61.2	-41.3	-27.2
1985	-41.1	-124.3	-3.1	-14.8	-21.8	-104.4	-3.6	-69.5	-51.8	-32.8
1986	-38.6	-105.1	-8.1	-14.9	-20.3	-97.3	19.3	-69.9	-51.6	-29.3
1987	-37.1	-129.9	-12.4	-19.9	-16.4	-117.1	14.1	-51.9	-54.0	-30.3
1988	-38.5	-149.8	-21.7	-23.3	-16.9	-116.6	30.7	-65.6	-51.7	-41.5
1989	-38.4	-165.1	-23.1	-15.0	-15.5	-120.3	33.4	-58.7	-57.4	-33.7
1990	-40.8	-154.3	-15.0	-6.9	-10.3	-138.8	-1.8	-83.1	-89.8	-62.0

Like in Bosnia and Herzegovina and Montenegro, there was a tendency toward a relative drop in Macedonia's sectoral productivity, i.e. a widening of the gap between Macedonian sectoral productivity and the average productivity of the corresponding sectors at the level of Yugoslavia. Thus, in the initial years the drop in GDP caused by this was around one-fourth, and, in the final years, the decline exceeded one-third of real GDP.

Of all the sectors, only trade achieved a higher real GDP than hypothetical, which was in the 1965-1984 period. The sector achieved these results owing to a positive structural shift, because its differential shift was negative during all of the surveyed years.

Agriculture recorded the highest losses owing to its relatively low productivity. Had its productivity been equal to the Yugoslav average, its GDP would have been 1.5 times bigger.

Table 2.44 PRODUCTIVITY IN MACEDONIA: NET DIFFERENTIAL SHIFT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-1414	-120	-9	-7	-263	-249	5	-258	-404	-107
1966	-1702	-159	-14	-10	-554	-222	-6	-219	-392	-125
1967	-1696	-155	-12	-12	-507	-293	-1	-218	-387	-110
1968	-1771	-200	-21	12	-408	-339	-11	-252	-450	-104
1969	-1950	-161	-20	-12	-483	-329	-21	-241	-555	-128
1970	-1984	-114	-14	-6	-407	-368	-28	-268	-641	-138
1971	-2409	-183	-13	-14	-668	-343	-30	-284	-717	-155
1972	-2751	-226	-11	-27	-869	-409	-48	-306	-718	-137
1973	-2858	-255	-7	-30	-795	-433	-60	-325	-810	-142
1974	-3343	-317	-19	-39	-892	-522	-71	-372	-985	-126
1975	-3776	-232	-14	-44	-1206	-605	-94	-399	-1024	-157
1976	-3706	-265	-14	-51	-1176	-540	-94	-400	-1046	-119
1977	-4104	-440	-35	-42	-1126	-736	-119	-360	-1103	-143
1978	-4407	-417	-38	-39	-1249	-930	-55	-409	-1192	-79
1979	-4822	-455	-37	-26	-1573	-1044	-15	-463	-1097	-112
1980	-5517	-465	-28	-23	-1767	-1148	-46	-692	-1221	-127
1981	-5808	-500	-21	-30	-2037	-1146	-31	-836	-1090	-115
1982	-6143	-485	-20	-24	-2190	-1092	-55	-862	-1276	-140
1983	-6282	-611	-15	-44	-2247	-930	14	-902	-1367	-179
1984	-6415	-689	-11	-21	-2233	-927	-6	-926	-1435	-168
1985	-7076	-704	-3	-35	-2385	-1022	-18	-1040	-1672	-199
1986	-6968	-714	-7	-35	-2347	-981	110	-1100	-1723	-171
1987	-6516	-765	-10	-44	-1956	-1054	67	-938	-1653	-163
1988	-6451	-807	-17	-51	-1982	-955	180	-1084	-1527	-210
1989	-6363	-870	-17	-34	-1872	-958	208	-1026	-1646	-149
1990	-6351	-838	-11	-15	-1187	-914	-6	-1194	-1971	-214

Table 2.45 PRODUCTIVITY IN MACEDONIA: ALLOCATION EFFECT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-161	-89	-8	2	42	-91	-2	25	-64	23
1966	-93	-110	-11	3	63	-72	2	32	-37	36
1967	-117	-105	-9	3	54	-98	0	30	-28	34
1968	-199	-138	-24	-5	43	-101	3	31	-43	35
1969	-154	-121	-28	4	49	-83	6	38	-62	42
1970	-121	-92	-17	2	36	-74	8	42	-72	47
1971	-122	-155	-12	4	46	-62	8	46	-53	55
1972	-141	-221	-8	8	58	-74	11	49	-15	50
1973	-173	-261	-4	8	46	-58	12	56	-25	54
1974	-252	-321	-14	10	48	-42	11	64	-56	49
1975	-134	-239	-13	11	73	-44	11	66	-54	55
1976	-175	-289	-13	11	62	-33	14	71	-43	45
1977	-440	-512	-35	12	72	-103	12	83	-19	52
1978	-473	-493	-43	12	58	-141	16	92	-9	35
1979	-501	-563	-39	8	61	-159	5	111	25	48
1980	-453	-581	-29	7	69	-223	17	174	60	53
1981	-458	-612	-16	8	79	-245	12	225	42	49
1982	-361	-505	-12	7	48	-231	24	236	12	59
1983	-477	-649	-8	11	35	-199	-7	259	2	79
1984	-542	-732	-5	5	26	-183	3	269	-2	76
1985	-487	-691	-1	7	2	-163	9	294	-38	94
1986	-585	-748	-4	7	-15	-140	-63	309	-14	83
1987	-678	-866	-7	8	-13	-133	-40	267	29	77
1988	-778	-976	-15	7	-8	-106	-113	296	38	99
1989	-945	-1094	-14	5	-9	-115	-137	280	67	70
1990	-595	-818	-8	3	34	-183	3	304	-6	77

Table 2.46 PRODUCTIVITY IN MACEDONIA:
TYPES OF ALLOCATION EFFECT

Year	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	1	1	2	2	1	3	2	1	2
1966	1	1	2	2	1	2	2	1	2
1967	1	1	2	2	1	2	2	1	2
1968	1	1	3	2	1	2	2	1	3
1969	1	1	2	2	1	2	2	1	2
1970	1	1	2	2	1	2	2	1	2
1971	1	1	2	2	1	2	2	1	2
1972	1	1	2	2	1	2	2	1	2
1973	1	1	2	2	1	2	2	1	2
1974	1	1	2	2	1	2	2	1	2
1975	1	1	2	2	1	2	2	1	2
1976	1	1	2	2	1	2	2	1	2
1977	1	1	2	2	1	2	2	1	2
1978	1	1	2	2	1	2	2	1	2
1979	1	1	2	2	1	2	2	2	2
1980	1	1	2	2	1	2	2	2	2
1981	1	1	2	2	1	2	2	2	2
1982	1	1	2	2	1	2	2	2	2
1983	1	1	2	2	1	3	2	2	2
1984	1	1	2	2	1	2	2	1	2
1985	1	1	2	2	1	2	2	1	2
1986	1	1	2	1	1	3	2	1	2
1987	1	1	2	1	1	3	2	2	2
1988	1	1	2	1	1	3	2	2	2
1989	1	1	2	1	1	3	2	2	2
1990	1	1	2	2	1	2	2	1	2

Owing to below-average sectoral productivity in the Macedonian economy, the Type 3 allocation effect, which marks a comparatively solid but non-specialized sector, appeared only seven times. Logically, it was registered in the same years and sectors in which the relative differential shift was positive: six times in artisanship (1965, 1983 and 1986-1989) and once in forestry (in 1968). In the other years these two sectors were characterized by the Type 2 allocation effect. The same type

marked catering and tourism and transport and communication throughout the entire analyzed period (*Table 2.46*).

Agriculture, water management and construction were sectors that the Macedonian economy specialized in (they had above-average share in employment), although they were comparatively bad (below-average productivity), which made them Type 1 sectors.

Macedonia's manufacturing did not achieve above-average productivity prior to the year 1986, and was therefore characterized by the Type 2 allocation effect. From 1986 to 1989, when its share in employment became above-average, and as a result of the republic specializing in it, this sector was marked by the Type 1 allocation effect.

In the sector of trade periods of specialization (1965-1978 and 1984-1986) alternated with periods of non-specialization (1979-1983 and 1987-1989) and, with its position of non-competitiveness unchanged, in the former case the sector was characterized by the Type 1 allocation effect, and in the latter, by the Type 2 allocation effect.

Slovenia

Table 2.47 shows trends in the Slovenian *social* (non-private) sector's GDP.

The data presented in *Table 2.48* indicates that during two years workers in Slovenia's economy achieved maximum productivity: in 1979 and 1980, one worker produced on average 92,000 dinars of the republic's GDP. In Slovenia, too, the year with the lowest productivity in the surveyed period was 1965.

The average productivity of workers during the entire period from 1965 to 1990 was 85,000 dinars per worker. In Slovenia, as well, trade was the sector with the highest average productivity: 133,000 dinars per worker, while artisanship had the lowest productivity – 47,000 dinars per worker.

In every year of the analyzed period Slovenia's real GDP exceeded hypothetical, meaning that its productivity was continuously above average. Based on this parameter, Slovenia's gains ranged from 0.2% in 1965 to 29.8% in 1990. The upward tendency in the positive difference between the republic's economy and the average productivity at the level of Yugoslavia is clearly manifested (*Table 2.52*).

Every year, the negative structural shift, which indicates above-average share in relatively low-productive sectors at the level of Yugoslavia, was annulled by a much higher sectoral productivity manifested in a constantly positive and continuously rising differential shift (*Tables 2.50 and 2.51*).

The negative differential shift was a one-time occurrence and appeared in only three sectors: in 1965 in the manufacturing, and in 1966 in water management and agriculture. In all of the other sectors not once in the surveyed period was sectoral productivity below the Yugoslav average in the corresponding sectors.

The sectors in which real GDP exceeded hypothetical during the entire period were water management, transport and communication and trade. Trade particularly stood out due to its productivity's positive effects: in 1988, for example, more than one-half of this sector's GDP can be seen as the result of higher labor productivity.

Trade was followed by the manufacturing and construction, the two sectors in which hypothetical GDP was higher than real in only two years. This was the case with the manufacturing in 1965 and 1967, and with construction in 1971 and 1973. As of 1970, Slovenia had above-average productivity in agriculture.

Although forestry also showed above-average productivity throughout the surveyed period, in 1982 alone the sector's employees achieved a sectoral difference in productivity that was capable of making up for the negative effects of the structural component. With catering and tourism, however, the situation was the reverse: as of 1974, the positive difference in sectoral productivity was no longer sufficient to compensate for the negative effects of the structural shift and in that year the sector's GDP was below hypothetical.

Artisanship was the only sector in Slovenia which despite having a positive differential shift throughout the analyzed period continuously achieved a real GDP smaller than hypothetical.

Table 2.47 SLOVENIA: GDP OF THE SOCIAL SECTOR

In 1972 prices

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	21873	518	66	406	10832	2235	470	1955	4535	856
1966	22786	531	68	415	11240	2236	515	2021	4892	868
1967	23536	576	74	409	11498	2345	492	2121	5192	829
1968	25167	594	76	401	12351	2601	519	2248	5504	872
1969	27810	609	78	403	13820	2736	551	2434	6228	952
1970	30547	650	83	420	15212	3031	588	2659	6904	1000
1971	33107	766	98	427	16431	3155	630	2854	7720	1026
1972	35127	698	90	437	17637	3401	668	2939	8179	1078
1973	37075	890	114	446	18746	3452	701	3165	8474	1087
1974	40887	961	123	467	20722	4167	752	3474	9117	1105
1975	43332	932	120	479	22231	4716	998	3474	9188	1193
1976	43946	1038	133	472	22681	4523	1049	3544	9316	1189
1977	47276	1092	162	514	24323	4985	1120	3771	10038	1271
1978	51398	1219	162	508	26216	5517	1200	4147	11079	1351
1979	55305	1435	196	502	27911	6182	1236	4537	11743	1563

1980	56464	1578	170	494	28556	6623	1317	4680	11459	1588
1981	55765	1603	167	511	29233	6007	1330	4623	10745	1546
1982	55481	1743	164	544	29678	5136	1398	4790	10530	1498
1983	55939	1804	164	532	30743	4309	1421	4751	10656	1559
1984	57269	2009	164	529	31339	4309	1407	4942	10976	1594
1985	58139	1867	144	546	31700	4525	1425	5161	11096	1675
1986	59533	1977	147	501	32300	4927	1438	5259	11329	1655
1987	58935	2216	150	500	31890	5507	1284	5232	10646	1510
1988	57286	2280	160	505	31072	5044	1234	5290	10178	1523
1989	56816	2068	149	464	31467	4646	1277	5273	10168	1304
1990	51311	2151	138	341	28067	3929	1174	5137	9103	1271

Table 2.48 SLOVENIA: LABOR PRODUCTIVITY

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	0,043	0,035	0,051	0,035	0,033	0,045	0,025	0,059	0,116	0,066
1966	0,056	0,039	0,051	0,037	0,048	0,049	0,028	0,064	0,126	0,067
1967	0,058	0,046	0,060	0,041	0,050	0,051	0,027	0,067	0,131	0,064
1968	0,062	0,050	0,067	0,044	0,053	0,055	0,031	0,073	0,133	0,065
1969	0,066	0,054	0,078	0,045	0,056	0,056	0,032	0,077	0,143	0,069
1970	0,070	0,059	0,080	0,049	0,060	0,058	0,034	0,082	0,147	0,069
1971	0,072	0,070	0,089	0,051	0,062	0,058	0,035	0,085	0,151	0,065
1972	0,074	0,063	0,078	0,052	0,064	0,063	0,037	0,086	0,150	0,065
1973	0,075	0,077	0,085	0,054	0,065	0,061	0,039	0,091	0,148	0,063
1974	0,079	0,085	0,089	0,058	0,069	0,068	0,041	0,099	0,150	0,063
1975	0,080	0,078	0,082	0,059	0,071	0,072	0,052	0,097	0,145	0,063
1976.	0,080	0,091	0,104	0,057	0,070	0,068	0,053	0,096	0,143	0,060
1977	0,083	0,098	0,115	0,062	0,073	0,071	0,054	0,098	0,145	0,064
1978	0,088	0,115	0,116	0,062	0,078	0,079	0,049	0,102	0,154	0,064
1979	0,092	0,130	0,125	0,064	0,081	0,085	0,048	0,106	0,157	0,072
1980	0,092	0,144	0,102	0,064	0,082	0,091	0,048	0,106	0,150	0,070
1981	0,091	0,137	0,098	0,068	0,083	0,086	0,048	0,103	0,140	0,066
1982	0,090	0,142	0,096	0,072	0,084	0,077	0,050	0,106	0,139	0,063
1983	0,090	0,142	0,096	0,070	0,086	0,067	0,050	0,103	0,141	0,063

1984	0,091	0,153	0,103	0,069	0,086	0,067	0,049	0,105	0,147	0,064
1985	0,092	0,137	0,103	0,072	0,086	0,070	0,049	0,107	0,149	0,065
1986	0,092	0,143	0,105	0,068	0,086	0,077	0,048	0,106	0,150	0,062
1987	0,090	0,158	0,107	0,069	0,084	0,088	0,041	0,106	0,138	0,056
1988	0,089	0,165	0,107	0,072	0,082	0,085	0,043	0,107	0,132	0,056
1989	0,090	0,152	0,105	0,090	0,084	0,083	0,046	0,109	0,131	0,049
1990	0,085	0,161	0,104	0,056	0,077	0,077	0,052	0,111	0,125	0,051

Table 2.49 PRODUCTIVITY IN SLOVENIA: HYPOTHETICAL GDP

In 1972 prices

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	21839	641	56	504	14017	2151	799	1433	1679	559
1966	19550	659	64	542	11186	2213	874	1523	1866	622
1967	20159	627	61	494	11564	2310	895	1587	1974	648
1968	21327	627	60	481	12300	2494	868	1624	2175	699
1969	23329	631	55	495	13572	2703	949	1750	2414	761
1970	25273	631	60	492	14645	3015	1010	1877	2701	842
1971	27615	663	66	508	15991	3270	1076	2022	3075	945
1972	28860	677	70	510	16827	3299	1109	2065	3299	1005
1973	30462	717	83	514	17793	3483	1108	2146	3557	1062
1974	33280	731	90	517	19521	3931	1186	2259	3911	1134
1975	34522	761	94	517	20162	4212	1238	2291	4039	1208
1976	35366	732	82	530	20677	4259	1269	2367	4177	1273
1977	38170	747	94	553	22183	4683	1391	2558	4629	1332
1978	41019	742	97	570	23657	4880	1711	2839	5041	1481
1979	43438	793	113	561	24868	5210	1863	3081	5380	1569
1980	43822	784	119	549	24958	5195	1951	3164	5477	1626
1981	43284	826	120	527	24706	4934	1954	3159	5401	1657
1982	42222	845	117	522	24269	4564	1924	3114	5224	1643
1983	41282	848	113	507	23858	4304	1909	3070	5032	1642
1984	42044	879	107	517	24434	4300	1939	3167	5025	1677
1985	42095	903	93	504	24548	4274	1918	3192	4944	1719
1986	42894	916	93	491	25063	4264	1972	3281	5027	1786
1987	42147	905	90	465	24667	4066	2030	3187	4977	1758

1988	40845	877	95	445	24017	3776	1837	3140	4914	1742
1989	40386	873	91	422	23872	3599	1761	3084	4982	1702
1990	36022	801	79	363	21718	3052	1364	2779	4366	1501

Table 2.50 PRODUCTIVITY IN SLOVENIA: STRUCTURAL SHIFT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-546	-201	5	-167	-1457	-209	-428	136	1699	76
1966	-319	-121	5	-174	-1149	-237	-491	80	1729	40
1967	-445	-76	-6	-136	-1463	-176	-509	111	1836	-24
1968	-405	-68	4	-137	-1485	-246	-484	86	1912	13
1969	-469	-39	1	-169	-1610	-331	-543	89	2122	11
1970	-443	-84	-6	-160	-1722	-354	-578	117	2378	-34
1971	-525	9	-2	-178	-1868	-559	-621	122	2675	-102
1972	-475	-13	-7	-173	-1817	-579	-616	81	2801	-151
1973	-543	20	-9	-171	-1891	-694	-589	165	2830	-204
1974	-571	37	1	-177	-1871	-869	-631	239	2973	-272
1975	-416	-47	-3	-176	-1590	-743	-567	143	2868	-300
1976	-469	32	3	-174	-1558	-725	-569	113	2751	-341
1977	-311	52	3	-160	-1517	-824	-652	67	3123	-402
1978	-259	-3	-9	-180	-1559	-812	-858	149	3493	-480
1979	-230	-3	-14	-175	-1366	-835	-962	134	3516	-525
1980	-176	-3	-13	-179	-960	-952	-1013	177	3331	-565
1981	-57	-5	-12	-158	-427	-1050	-1006	194	3001	-594
1982	-136	65	-10	-138	-564	-1133	-946	119	3031	-559
1983	-99	60	-9	-123	-165	-1396	-931	207	2797	-540
1984	-114	112	-14	-117	240	-1503	-948	264	2440	-589
1985	-100	46	-11	-118	315	-1482	-908	339	2306	-587
1986	-224	103	-10	-118	296	-1502	-1069	425	2372	-721
1987	-253	88	-7	-105	411	-1369	-1162	651	2001	-762
1988	-140	92	-5	-82	565	-1327	-1051	682	1722	-737
1989	-106	116	-7	-80	624	-1223	-983	673	1667	-892
1990	-238	156	0	-83	-38	-1033	-699	689	1506	-734

Table 2.51 PRODUCTIVITY IN SLOVENIA: DIFFERENTIAL SHIFT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	581	77	6	69	-1727	293	99	386	1157	220
1966	3555	-7	-0	47	1203	259	132	418	1296	206
1967	3822	25	19	51	1398	211	106	424	1382	205
1968	4245	35	12	58	1537	352	135	538	1417	161
1969	4951	17	22	77	1859	364	145	595	1692	181
1970	5717	103	29	87	2288	370	156	666	1825	192
1971	6017	94	34	97	2309	444	176	710	1970	184
1972	6741	34	27	100	2628	682	175	793	2078	224
1973	7156	153	40	103	2844	663	182	854	2087	229
1974	8177	193	33	127	3072	1104	197	976	2233	243
1975	9226	218	29	138	3659	1247	327	1041	2281	285
1976	9049	275	48	116	3562	989	349	1064	2388	257
1977	9417	294	65	121	3657	1126	380	1146	2286	340
1978	10639	481	73	118	4117	1449	347	1159	2544	350
1979	12097	645	98	116	4409	1808	335	1322	2847	518
1980	12818	797	64	124	4558	2380	379	1339	2651	526
1981	12538	782	59	142	4954	2123	382	1270	2344	483
1982	13395	832	58	159	5973	1705	419	1558	2276	415
1983	14756	896	59	148	7050	1401	444	1474	2828	457
1984	15339	1018	71	129	6666	1511	416	1512	3511	505
1985	16144	919	62	160	6837	1733	415	1630	3846	544
1986	16863	958	64	127	6940	2165	535	1554	3930	590
1987	17041	1223	67	139	6811	2810	416	1395	3667	514
1988	16581	1310	69	142	6490	2595	448	1468	3541	518
1989	16536	1079	65	122	6972	2269	500	1516	3519	493
1990	15526	1195	59	61	6387	1910	510	1669	3231	505

Table 2.52 PRODUCTIVITY IN SLOVENIA:
RATIO OF HYPOTHETICAL AND REAL GDP

In %

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	99.8	123.9	84.5	124.2	129.4	96.2	169.8	73.3	37.0	65.4
1966	85.8	124.1	94.0	130.6	99.5	99.0	169.8	75.4	38.1	71.7
1967	85.6	108.8	82.6	120.8	100.6	98.5	182.0	74.8	38.0	78.2
1968	84.7	105.5	78.8	119.9	99.6	95.9	167.2	72.2	39.5	80.1
1969	83.9	103.6	71.1	122.8	98.2	98.8	172.4	71.9	38.8	79.9
1970	82.7	97.0	72.0	117.2	96.3	99.5	172.0	70.6	39.1	84.2
1971	83.4	86.5	67.5	119.0	97.3	103.7	170.6	70.9	39.8	92.0
1972	82.2	96.9	77.6	116.6	95.4	97.0	166.1	70.3	40.3	93.2
1973	82.2	80.5	72.8	115.2	94.9	100.9	158.0	67.8	42.0	97.7
1974	81.4	76.1	72.8	110.7	94.2	94.4	157.8	65.0	42.9	102.6
1975	79.7	81.7	78.3	107.9	90.7	89.3	124.1	65.9	44.0	101.2
1976	80.5	70.5	61.5	112.3	91.2	94.2	121.0	66.8	44.8	107.1
1977	80.7	68.4	58.1	107.6	91.2	93.9	124.3	67.8	46.1	104.8
1978	79.8	60.8	60.2	112.3	90.2	88.5	142.6	68.5	45.5	109.6
1979	78.5	55.2	57.6	111.8	89.1	84.3	150.8	67.9	45.8	100.4
1980	77.6	49.7	69.9	111.1	87.4	78.4	148.1	67.6	47.8	102.4
1981	77.6	51.6	71.8	103.2	84.5	82.1	146.9	68.3	50.3	107.2
1982	76.1	48.5	71.2	96.0	81.8	88.9	137.7	65.0	49.6	109.7
1983	73.8	47.0	69.2	95.3	77.6	99.9	134.3	64.6	47.2	105.3
1984	73.4	43.7	65.5	97.7	78.0	99.8	137.8	64.1	45.8	105.2
1985	72.4	48.3	64.5	92.4	77.4	94.5	134.6	61.9	44.6	102.6
1986	72.1	46.4	63.2	98.1	77.6	86.5	137.2	62.4	44.4	107.9
1987	71.5	40.8	60.3	93.1	77.4	73.8	158.1	60.9	46.8	116.4
1988	71.3	38.5	59.6	88.1	77.3	74.9	148.9	59.4	48.3	114.4
1989	71.1	42.2	61.1	91.0	75.9	77.5	137.9	58.5	49.0	130.6
1990	70.2	37.2	57.4	106.4	77.4	77.7	116.1	54.1	48.0	118.1

Table 2.53 PRODUCTIVITY IN SLOVENIA:
RATIO OF STRUCTURAL SHIFT AND REAL GDP

In %

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-2.5	-38.8	7.0	-41.2	-13.5	-9.4	-91.0	7.0	37.5	8.9
1966	-1.4	-22.9	6.7	-42.0	-10.2	-10.6	-95.3	3.9	35.4	4.6
1967	-1.9	-13.2	-8.7	-33.3	-12.7	-7.5	-103.5	5.2	35.4	-2.9
1968	-1.6	-11.4	5.1	-34.3	-12.0	-9.4	-93.2	3.8	34.7	1.4
1969	-1.7	-6.5	1.3	-41.8	-11.7	-12.1	-98.6	3.7	34.1	1.1
1970	-1.5	-12.9	-7.3	-38.1	-11.3	-11.7	-98.5	4.4	34.4	-3.4
1971	-1.6	1.2	-1.8	-41.7	-11.4	-17.7	-98.5	4.3	34.7	-10.0
1972	-1.4	-1.8	-7.3	-39.5	-10.3	-17.0	-92.3	2.7	34.3	-14.0
1973	-1.5	2.3	-7.9	-38.3	-10.1	-20.1	-84.0	5.2	33.4	-18.8
1974	-1.4	3.8	0.7	-38.0	-9.0	-20.9	-84.0	6.9	32.6	-24.6
1975	-1.0	-5.0	-2.9	-36.7	-7.2	-15.8	-56.9	4.1	31.2	-25.1
1976	-1.1	3.0	2.0	-36.8	-6.9	-16.0	-54.2	3.2	29.5	-28.7
1977	-0.7	4.7	1.7	-31.2	-6.2	-16.5	-58.2	1.8	31.1	-31.6
1978	-0.5	-0.3	-5.5	-35.5	-5.9	-14.7	-71.5	3.6	31.5	-35.5
1979	-0.4	-0.2	-7.4	-34.9	-4.9	-13.5	-77.8	3.0	29.9	-33.6
1980	-0.3	-0.2	-7.4	-36.3	-3.4	-14.4	-76.9	3.8	29.1	-35.6
1981	-0.1	-0.3	-6.9	-30.9	-1.5	-17.5	-75.6	4.2	27.9	-38.4
1982	-0.2	3.7	-6.3	-25.3	-1.9	-22.1	-67.6	2.5	28.8	-37.3
1983	-0.2	3.3	-5.2	-23.1	-0.5	-32.4	-65.5	4.4	26.2	-34.6
1984	-0.2	5.6	-8.5	-22.1	0.8	-34.9	-67.3	5.3	22.2	-36.9
1985	-0.2	2.4	-7.4	-21.6	1.0	-32.7	-63.7	6.6	20.8	-35.1
1986	-0.4	5.2	-6.8	-23.5	0.9	-30.5	-74.4	8.1	20.9	-43.6
1987	-0.4	4.0	-4.8	-20.9	1.3	-24.9	-90.5	12.4	18.8	-50.5
1988	-0.2	4.1	-3.0	-16.3	1.8	-26.3	-85.2	12.9	16.9	-48.4
1989	-0.2	5.6	-5.0	-17.3	2.0	-26.3	-77.0	12.8	16.4	-68.4
1990	-0.5	7.2	-0.2	-24.4	-0.1	-26.3	-59.6	13.4	16.5	-57.8

Table 2.54 PRODUCTIVITY IN SLOVENIA:
RATIO OF DIFFERENTIAL SHIFT AND REAL GDP

In %

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	2.7	14.9	8.5	17.0	-15.9	13.1	21.1	19.7	25.5	25.8
1966	15.6	-1.2	-0.6	11.4	10.7	11.6	25.6	20.7	26.5	23.8
1967	16.2	4.4	26.1	12.5	12.2	9.0	21.6	20.0	26.6	24.7
1968	16.9	5.9	16.0	14.4	12.4	13.6	26.0	23.9	25.7	18.4
1969	17.8	2.9	27.6	19.0	13.4	13.3	26.2	24.5	27.2	19.0
1970	18.7	15.9	35.3	20.8	15.0	12.2	26.5	25.0	26.4	19.2
1971	18.2	12.3	34.3	22.8	14.1	14.1	27.9	24.9	25.5	17.9
1972	19.2	4.9	29.7	22.9	14.9	20.0	26.3	27.0	25.4	20.8
1973	19.3	17.2	35.1	23.1	15.2	19.2	26.0	27.0	24.6	21.1
1974	20.0	20.1	26.5	27.2	14.8	26.5	26.2	28.1	24.5	22.0
1975	21.3	23.4	24.6	28.8	16.5	26.4	32.7	30.0	24.8	23.9
1976	20.6	26.5	36.5	24.5	15.7	21.9	33.3	30.0	25.6	21.6
1977	19.9	26.9	40.2	23.5	15.0	22.6	34.0	30.4	22.8	26.8
1978	20.7	39.4	45.3	23.2	15.7	26.3	28.9	28.0	23.0	25.9
1979	21.9	44.9	49.8	23.1	15.8	29.2	27.1	29.1	24.2	33.2
1980	22.7	50.5	37.5	25.2	16.0	35.9	28.8	28.6	23.1	33.1
1981	22.5	48.8	35.1	27.7	16.9	35.3	28.7	27.5	21.8	31.2
1982	24.1	47.8	35.1	29.3	20.1	33.2	30.0	32.5	21.6	27.7
1983	26.4	49.7	36.0	27.7	22.9	32.5	31.2	31.0	26.5	29.3
1984	26.8	50.7	43.1	24.5	21.3	35.1	29.5	30.6	32.0	31.7
1985	27.8	49.2	42.9	29.2	21.6	38.3	29.1	31.6	34.7	32.5
1986	28.3	48.4	43.6	25.4	21.5	43.9	37.2	29.5	34.7	35.6
1987	28.9	55.2	44.4	27.8	21.4	51.0	32.4	26.7	34.4	34.0
1988	28.9	57.5	43.4	28.2	20.9	51.4	36.3	27.7	34.8	34.0
1989	29.1	52.2	43.9	26.3	22.2	48.8	39.1	28.8	34.6	37.8
1990	30.3	55.5	42.8	17.9	22.8	48.6	43.4	32.5	35.5	39.7

Table 2.55 PRODUCTIVITY IN SLOVENIA: NET DIFFERENTIAL SHIFT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	1832	188	8	85	-1336	385	114	544	1559	286
1966	3706	-14	-1	46	1023	296	124	514	1489	229
1967	4011	54	32	51	1188	239	99	524	1592	233
1968	4468	73	17	59	1293	408	134	704	1602	179
1969	5190	37	37	83	1550	434	144	781	1921	204
1970	6029	222	51	97	1917	431	155	881	2058	219
1971	6352	200	58	110	1942	513	177	945	2196	212
1972	7056	72	47	112	2214	793	173	1078	2307	260
1973	7603	318	64	118	2414	738	181	1173	2322	275
1974	8768	426	48	154	2606	1196	195	1363	2475	305
1975	9816	476	40	169	3115	1337	316	1481	2534	348
1976	9740	625	78	132	3023	1088	337	1501	2644	312
1977	10129	681	104	136	3122	1239	369	1614	2426	439
1978	11625	1189	126	130	3521	1686	308	1556	2669	439
1979	13390	1554	152	131	3791	2125	291	1692	3002	653
1980	14387	1936	92	139	3929	2835	323	1682	2803	647
1981	13850	1810	83	162	4295	2554	321	1567	2473	583
1982	14569	1877	82	182	5187	2086	350	1898	2412	494
1983	15838	2016	86	167	6135	1706	369	1772	3051	536
1984	16758	2296	112	145	5808	1814	343	1790	3844	607
1985	17497	2018	111	183	5994	2035	343	1919	4260	634
1986	18277	2109	115	150	6141	2512	438	1806	4333	673
1987	18852	2690	121	167	6084	3284	319	1608	3996	582
1988	18456	2908	114	169	5790	3007	371	1681	3827	589
1989	17989	2392	111	147	6229	2628	419	1755	3746	563
1990	17148	2624	97	76	5686	2263	425	1926	3488	562

Table 2.56 PRODUCTIVITY IN SLOVENIA: ALLOCATION EFFECT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-1251	-111	-2	-16	-392	-91	-15	-158	-402	-65
1966	-152	7	0	1	180	-37	7	-96	-192	-23
1967	-189	-28	-12	0	209	-28	7	-100	-210	-28
1968	-223	-37	-5	-1	244	-56	1	-167	-184	-18
1969	-239	-19	-16	-6	309	-70	1	-186	-229	-24
1970	-312	-119	-21	-9	372	-61	1	-215	-232	-27
1971	-335	-106	-24	-13	367	-68	-1	-236	-226	-28
1972	-315	-38	-20	-12	414	-111	3	-285	-229	-35
1973	-447	-165	-24	-15	430	-74	1	-319	-235	-46
1974	-591	-233	-15	-27	466	-92	1	-387	-242	-62
1975	-591	-259	-11	-31	545	-90	10	-440	-252	-63
1976	-691	-350	-29	-17	539	-99	12	-437	-256	-54
1977	-713	-387	-39	-15	535	-113	11	-468	-140	-98
1978	-986	-708	-53	-12	596	-236	38	-396	-125	-89
1979	-1294	-909	-55	-15	618	-317	44	-369	-155	-134
1980	-1569	-1139	-29	-15	629	-455	56	-343	-152	-121
1981	-1312	-1029	-25	-20	659	-432	61	-297	-129	-100
1982	-1173	-1045	-25	-23	786	-381	69	-340	-136	-79
1983	-1082	-1120	-27	-20	914	-305	75	-298	-224	-79
1984	-1419	-1278	-41	-16	858	-302	73	-278	-333	-101
1985	-1353	-1099	-49	-24	842	-302	72	-289	-414	-90
1986	-1413	-1151	-51	-22	800	-347	97	-252	-403	-83
1987	-1810	-1467	-55	-28	727	-474	97	-214	-329	-69
1988	-1875	-1598	-44	-26	700	-413	77	-214	-286	-71
1989	-1453	-1313	-45	-25	743	-358	81	-239	-227	-70
1990	-1622	-1429	-38	-15	701	-353	85	-258	-257	-57

Table 2.57 PRODUCTION IN SLOVENIA: TYPES OF ALLOCATION EFFECT

Year	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	3	3	3	1	3	3	3	3	3
1966	2	2	4	4	3	4	3	3	3
1967	3	3	4	4	3	4	3	3	3
1968	3	3	3	4	3	4	3	3	3
1969	3	3	3	4	3	4	3	3	3
1970	3	3	3	4	3	4	3	3	3
1971	3	3	3	4	3	3	3	3	3
1972	3	3	3	4	3	4	3	3	3
1973	3	3	3	4	3	4	3	3	3
1974	3	3	3	4	3	4	3	3	3
1975	3	3	3	4	3	4	3	3	3
1976	3	3	3	4	3	4	3	3	3
1977	3	3	3	4	3	4	3	3	3
1978	3	3	3	4	3	4	3	3	3
1979	3	3	3	4	3	4	3	3	3
1980	3	3	3	4	3	4	3	3	3
1981	3	3	3	4	3	4	3	3	3
1982	3	3	3	4	3	4	3	3	3
1983	3	3	3	4	3	4	3	3	3
1984	3	3	3	4	3	4	3	3	3
1985	3	3	3	4	3	4	3	3	3
1986	3	3	3	4	3	4	3	3	3
1987	3	3	3	4	3	4	3	3	3
1988	3	3	3	4	3	4	3	3	3
1989	3	3	3	4	3	4	3	3	3
1990	3	3	3	4	3	4	3	3	3

The analysis of the types of allocation effect reveals the reason why the structural shift in Slovenia's economy was continuously negative: specialization in comparatively good but, at the level of Yugoslavia, relatively non-productive sectors. These were the manufacturing and artisanship, which in all years were characterized by the Type 4 allocation effect, with the exception of the manufacturing in 1965, when this sector was Type 1 (See *Table 2.57*). (Yugoslavia's manufacturing had a positive structural shift, i.e. higher productivity than the economy's average only in the last five years of the analyzed period, whereas productivity in the Yugoslav artisanship sector was below average throughout.)

Serbia

Table 2.58 presents the data on GDP, and *Table 2.59* on labor productivity in all the segments of Serbia's *social* (non-private, "socialized") sector in the period from 1965 to 1990.

Employees in the Serbian economy achieved maximum productivity, much like in the case of Slovenia, in two years – 1979 and 1980, when it amounted to 69,000 dinars per worker. The initial year of the surveyed period, 1965, was the year of the lowest productivity – 43,000 dinars per worker.

Trade and artisanship were at the two opposite poles of the Serbian economy: trade, for its highest average productivity (90,000 dinars per worker), and artisanship, the lowest (27,000 dinars per worker).

Except for 1965, during all other years real GDP was below hypothetical, that is what Serbia would have achieved had its productivity been equal to the Yugoslav average (*Table 2.63*). The loss that the republic saw owing to this did not vary much and ranged from 0.6% (in 1990) and 6.5% (in 1972) of real GDP. The only gains, registered in 1965, were almost negligible: only 0.4% of the GDP was achieved that year.

The reason for such a ratio of real and hypothetical GDP lied in continuously smaller sectoral labor productivity, i.e. a negative differential shift which every year exceeded the positive effects of the structural shift. Even in cases in which there was a positive structural and a negative differential shift, a slight downward tendency in absolute amounts is noticeable, that is, both the sectoral employment structure and its productivity approached the Yugoslav average (*Tables 2.64* and *2.65*).

Table 2.58 SERBIA: GDP OF THE SOCIAL SECTOR

In 1972 prices

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	45500	3903	261	310	19165	5235	919	4227	9955	1525
1966	48080	4818	325	316	19446	5614	933	4440	10565	1623
1967	49383	4874	323	313	19412	6110	916	4741	11124	1571
1968	51533	4698	316	306	20145	6623	958	5070	11686	1731
1969	56779	5087	344	307	22424	7231	1010	5448	13065	1864
1970	60474	4308	295	321	24236	7861	1071	5946	14580	1855
1971	66432	5422	364	326	27211	7504	1140	6407	16159	1900
1972	69642	5281	365	333	29309	7456	1225	6633	17158	1882
1973	73105	5695	381	340	31286	7316	1284	7137	17752	1916
1974	79912	6122	408	357	34908	7810	1374	7849	18988	2097
1975	83345	5720	382	365	37415	8818	1374	7860	19217	2195
1976	87162	6296	405	361	39120	9848	1441	8017	19311	2363
1977	94874	6907	498	393	42818	10833	1543	8531	20831	2521
1978	103303	6583	498	388	46664	12481	1656	9387	22970	2676
1979	111345	6587	500	398	50915	13674	1834	9627	24880	2930
1980.	114276	6783	554	379	53801	13767	1835	8816	25598	2743
1981	116620	6854	563	397	56510	12799	1870	9306	25600	2721
1982	117113	7579	575	416	56813	12009	1929	8970	25935	2887
1983	115218	7534	580	405	57644	10014	1935	9036	25237	2833
1984	118187	8354	565	419	60962	9722	1973	9422	24039	2731
1985	119747	7909	561	422	62902	9712	2038	9720	23919	2564
1986	122734	8484	575	445	64975	9315	1827	10321	24521	2271
1987	122171	8336	594	436	65875	9251	1702	10758	23102	2117
1988	120747	8410	574	458	66529	8444	1725	10476	22112	2019
1989	122807	8830	556	452	67343	8210	1731	11356	22335	1994
1990	111681	8531	515	408	59601	7415	1592	10516	21283	1823

Table 2.59 SERBIA: LABOR PRODUCTIVITY

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	0,043	0,034	0,096	0,025	0,038	0,040	0,022	0,047	0,078	0,043
1966	0,047	0,047	0,080	0,031	0,040	0,043	0,024	0,049	0,084	0,046
1967	0,048	0,050	0,058	0,034	0,039	0,047	0,024	0,051	0,087	0,043
1968	0,050	0,053	0,084	0,036	0,041	0,047	0,026	0,052	0,091	0,048
1969	0,052	0,058	0,079	0,035	0,043	0,047	0,025	0,054	0,096	0,050
1970	0,054	0,051	0,063	0,036	0,045	0,050	0,027	0,056	0,101	0,047
1971	0,057	0,064	0,074	0,036	0,048	0,047	0,027	0,057	0,104	0,046
1972	0,057	0,063	0,065	0,036	0,049	0,045	0,030	0,057	0,105	0,043
1973	0,059	0,068	0,060	0,035	0,051	0,046	0,031	0,061	0,105	0,043
1974	0,061	0,069	0,079	0,035	0,054	0,047	0,032	0,065	0,107	0,044
1975	0,061	0,063	0,080	0,035	0,056	0,049	0,031	0,063	0,103	0,043
1976	0,062	0,069	0,081	0,035	0,057	0,051	0,032	0,061	0,100	0,045
1977	0,065	0,079	0,091	0,041	0,060	0,053	0,029	0,062	0,106	0,043
1978	0,067	0,072	0,090	0,040	0,062	0,056	0,030	0,067	0,114	0,043
1979	0,069	0,072	0,084	0,041	0,065	0,058	0,032	0,067	0,116	0,045
1980	0,069	0,073	0,097	0,037	0,067	0,057	0,030	0,059	0,114	0,041
1981	0,068	0,071	0,094	0,038	0,067	0,053	0,030	0,061	0,111	0,040
1982	0,067	0,075	0,088	0,039	0,066	0,051	0,030	0,058	0,110	0,041
1983	0,065	0,073	0,086	0,037	0,065	0,044	0,029	0,057	0,105	0,040
1984	0,065	0,078	0,081	0,037	0,067	0,043	0,029	0,059	0,098	0,038
1985	0,065	0,072	0,084	0,037	0,067	0,043	0,030	0,059	0,096	0,035
1986	0,065	0,076	0,087	0,038	0,066	0,042	0,026	0,061	0,096	0,031
1987	0,063	0,074	0,087	0,038	0,065	0,041	0,025	0,064	0,089	0,028
1988	0,062	0,073	0,086	0,039	0,064	0,039	0,025	0,062	0,085	0,027
1989	0,063	0,077	0,084	0,039	0,065	0,039	0,025	0,068	0,085	0,027
1990	0,059	0,076	0,085	0,033	0,059	0,038	0,027	0,065	0,084	0,028

Table 2.60 PRODUCTIVITY IN SERBIA: HYPOTHETICAL GDP

In 1972 prices

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	45325	4908	116	540	21510	5617	1805	3859	5452	1519
1966	49628	4986	195	496	23634	6300	1880	4339	6084	1714
1967	51370	4866	278	454	24529	6473	1929	4669	6366	1806
1968	54191	4645	198	446	25799	7336	1958	5154	6765	1889
1969	60115	4853	243	481	28608	8498	2202	5600	7548	2083
1970	64689	4895	270	513	30937	9129	2310	6078	8289	2268
1971	70651	5122	297	538	33930	9697	2505	6745	9313	2504
1972	74146	5091	341	562	36022	10021	2516	7025	9929	2638
1973	76859	5196	395	595	37744	9832	2547	7279	10489	2782
1974	83895	5701	332	667	41438	10735	2741	7752	11451	3078
1975	87229	5829	303	670	42961	11466	2797	8013	11955	3236
1976	90304	5829	322	657	44166	12260	2923	8371	12378	3397
1977	97772	5857	364	639	47690	13564	3541	9122	13078	3917
1978	107444	6392	388	673	52321	15513	3871	9838	14135	4314
1979	115619	6617	426	706	56318	16901	4176	10341	15453	4680
1980	118481	6640	409	726	57466	17323	4447	10610	16097	4762
1981	120162	6809	420	733	58999	16948	4450	10667	16321	4815
1982	119588	6959	450	733	59172	16199	4424	10673	16154	4824
1983	118067	6896	450	737	58913	15340	4439	10543	15995	4754
1984	121174	7159	467	755	60925	15164	4522	10798	16505	4880
1985	123030	7246	442	764	62736	14985	4463	10950	16577	4864
1986	126084	7401	437	774	65108	14865	4608	11153	16877	4862
1987	125696	7270	442	748	65982	14425	4470	10810	16740	4809
1988	124334	7298	426	737	65867	13662	4425	10686	16535	4698
1989	124573	7333	426	742	66236	13308	4441	10679	16747	4661
1990	112389	6759	362	741	60564	11732	3476	9639	15183	3933

Table 2.61 PRODUCTIVITY IN SERBIA: STRUCTURAL SHIFT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	634	-1537	10	-179	-2236	-547	-967	367	5517	206
1966	754	-918	14	-159	-2427	-674	-1056	227	5639	109
1967	742	-590	-29	-125	-3104	-492	-1097	325	5922	-67
1968	709	-503	13	-128	-3116	-723	-1091	273	5949	34
1969	793	-304	4	-164	-3395	-1039	-1260	286	6635	29
1970	707	-650	-27	-167	-3637	-1072	-1323	377	7295	-91
1971	1042	70	-8	-189	-3965	-1659	-1446	407	8103	-271
1972	940	-97	-32	-190	-3891	-1760	-1399	274	8431	-397
1973	951	147	-43	-198	-4011	-1960	-1354	560	8344	-536
1974	1045	285	3	-228	-3971	-2372	-1458	821	8705	-739
1975	894	-359	-11	-228	-3388	-2023	-1281	499	8488	-803
1976	962	251	11	215	-3329	-2088	-1310	399	8154	-911
1977	802	404	11	-185	-3261	-2386	-1660	237	8823	-1181
1978	667	-27	-35	-213	-3447	-2583	-1941	515	9796	-1398
1979	730	-22	-55	-220	-3093	-2710	-2156	451	10100	-1565
1980	734	-22	-43	-237	-2210	-3174	-2309	593	9790	-1654
1981	780	-40	-40	-220	-1020	-3606	-2290	656	9068	-1727
1982	868	537	-40	-193	-1376	-4022	-2173	407	9372	-1642
1983	767	488	-34	-178	-406	-4975	-2166	711	8890	-1563
1984	972	915	-61	-171	598	-5299	-2210	900	8014	-1713
1985	866	366	-51	-179	805	-5195	-2112	1163	7732	-1663
1986	1077	832	-47	-186	770	-5236	-2498	1444	7962	-1963
1987	1043	708	-35	-168	1100	-4857	-2558	2207	6731	-2084
1988	958	769	-21	-137	1548	-4800	-2531	2321	5796	-1987
1989	1020	974	-35	-141	1730	-4621	-2480	2330	5605	-2442
1990	985	1315	-1	-170	-106	-3971	-1783	2390	5237	-1925

Table 2.62 PRODUCTIVITY IN SERBIA: DIFFERENTIAL SHIFT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-459	532	135	-51	-109	165	81	1	-1014	-200
1966	-2302	750	116	-20	-1761	-11	109	-126	-1158	-201
1967	-2729	598	74	-16	-2013	129	84	-254	-1164	-168
1968	-3368	555	105	-13	-2538	9	91	-358	-1028	-193
1969	-4129	538	97	-10	-2789	-228	67	-438	-1118	-248
1970	-4921	64	52	-26	-3065	-196	84	-509	-1004	-322
1971	-5260	231	75	-23	-2754	-534	81	-746	-1257	-333
1972	-5444	286	56	-39	-2822	-805	108	-667	-1203	-358
1973	-4705	352	29	-57	-2447	-556	90	-703	-1081	-331
1974	-5028	136	73	-81	-2559	-553	91	-724	-1169	-242
1975	-4779	250	90	-77	-2158	-626	-142	-652	-1226	-238
1976	-4104	215	72	-81	-1717	-324	-172	-753	-1221	-123
1977	-3700	645	123	-61	-1611	-345	-338	-829	-1070	-215
1978	-4808	218	145	-72	-2210	-450	-274	-966	-960	-240
1979	-5004	-8	128	-88	-2310	-518	-186	-1165	-673	-185
1980	-4939	165	188	-110	-1455	-381	-303	-2387	-289	-365
1981	-4322	85	183	-116	-1469	-543	-289	-2017	212	-367
1982	-3344	83	165	-124	-982	-168	-321	-2110	409	-295
1983	-3616	150	164	-154	-863	-350	-338	-2218	352	-358
1984	-3959	280	159	-165	-561	-143	-339	-2275	-480	-436
1985	-4149	296	170	-164	-639	-78	-313	-2393	-390	-638
1986	-4428	251	186	-143	-903	-314	-282	-2276	-318	-628
1987	-4568	358	187	-144	-1206	-318	-209	-2259	-369	-609
1988	-4545	343	169	-143	-886	-417	-169	-2531	-219	-692
1989	-2786	523	165	-149	-624	-576	-229	-1654	-18	-225
1990	-1693	457	155	-164	-856	-346	-102	-1513	862	-185

Table 2.63 PRODUCTIVITY IN SERBIA:
RATIO OF HYPOTHETICAL AND REAL GDP

In %

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	99.6	125.8	44.5	174.1	112.2	107.3	196.3	91.3	54.8	99.6
1966	103.2	103.5	60.1	156.9	121.5	112.2	201.5	97.7	57.6	105.6
1967	104.0	99.8	86.2	145.0	126.4	105.9	210.7	98.5	57.2	114.9
1968	105.2	98.9	62.7	145.8	128.1	110.8	204.3	101.7	57.9	109.2
1969	105.9	95.4	70.6	156.7	127.6	117.5	218.1	102.8	57.8	111.7
1970	107.0	113.6	91.7	159.9	127.7	116.1	215.6	102.2	56.9	122.3
1971	106.3	94.5	81.5	165.1	124.7	129.2	219.8	105.3	57.6	131.8
1972	106.5	96.4	93.5	168.7	122.9	134.4	205.4	105.9	57.9	140.2
1973	105.1	91.2	103.7	175.0	120.6	134.4	198.5	102.0	59.1	145.2
1974	105.0	93.1	81.3	186.7	118.7	137.5	199.6	98.8	60.3	146.8
1975	104.7	101.9	79.4	183.5	114.8	130.0	203.6	101.9	62.2	147.4
1976	103.6	92.6	79.6	181.9	112.9	124.5	202.8	104.4	64.1	143.8
1977	103.1	84.8	73.1	162.6	111.4	125.2	229.5	106.9	62.8	155.4
1978	104.0	97.1	77.9	173.4	112.1	124.3	233.7	104.8	61.5	161.2
1979	103.8	100.5	85.2	177.4	110.6	123.6	227.6	107.4	62.1	159.7
1980	103.7	97.9	73.9	191.7	106.8	125.8	242.3	120.4	62.9	173.6
1981	103.0	99.3	74.7	184.6	104.4	132.4	238.0	114.6	63.8	177.0
1982	102.1	91.8	78.3	176.3	104.2	134.9	229.3	119.0	62.3	167.1
1983	102.5	91.5	77.6	181.9	102.2	153.2	229.4	116.7	63.4	167.8
1984	102.5	85.7	82.6	180.2	99.9	156.0	229.2	114.6	68.7	178.7
1985	102.7	91.6	78.8	181.2	99.7	154.3	219.0	112.7	69.3	189.7
1986	102.7	87.2	75.9	173.9	100.2	159.6	252.2	108.1	68.8	214.1
1987	102.9	87.2	74.4	171.5	100.2	155.9	262.6	100.5	72.5	227.2
1988	103.0	86.8	74.2	161.0	99.0	161.8	256.5	102.0	74.8	232.7
1989	101.4	83.0	76.6	164.2	98.4	162.1	256.5	94.0	75.0	233.7
1990	100.6	79.2	70.2	181.7	101.6	158.2	218.4	91.7	71.3	215.7

Table 2.64 PRODUCTIVITY IN SERBIA:
RATIO OF STRUCTURAL SHIFT AND REAL GDP

In %

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	1,4	-39,4	3,7	-57,8	-11,7	-10,4	-105,2	8,7	55,4	13,5
1966	1,6	-19,1	4,3	-50,5	-12,5	-12,0	-113,2	5,1	53,4	6,7
1967	1,5	-12,1	-9,1	-39,9	-16,0	-8,1	-119,9	6,9	53,2	-4,3
1968	1,4	-10,7	4,1	-41,7	-15,5	-10,9	-113,9	5,4	50,9	2,0
1969	1,4	-6,0	1,3	-53,4	-15,1	-14,4	-124,8	5,2	50,8	1,6
1970	1,2	-15,1	-9,2	-51,9	-15,0	-13,6	-123,4	6,3	50,0	-4,9
1971	1,6	1,3	-2,1	-57,9	-14,6	-22,1	-126,9	6,4	50,1	-14,3
1972	1,3	-1,8	-8,8	-57,1	-13,3	-23,6	-114,2	4,1	49,1	-21,1
1973	1,3	2,6	-11,3	-58,1	-12,8	-26,8	-105,5	7,9	47,0	-28,0
1974	1,3	4,7	0,8	-64,0	-11,4	-30,4	-106,2	10,5	45,8	-35,2
1975	1,1	-6,3	-2,9	-62,4	-9,1	-22,9	-93,3	6,4	44,2	-36,6
1976	1,1	4,0	2,6	-59,6	-8,5	-21,2	-90,9	5,0	42,2	-38,5
1977	0,8	5,9	2,1	-47,1	-7,6	-22,0	-107,6	2,8	42,4	-46,9
1978	0,6	-0,4	-7,1	-54,8	-7,4	-20,7	-117,2	5,5	42,6	-52,2
1979	0,7	-0,3	-10,9	-55,4	-6,1	-19,8	-117,5	4,7	40,6	-53,4
1980	0,6	-0,3	-7,8	-62,6	-4,1	-23,1	-125,8	6,7	38,2	-60,3
1981	0,7	-0,6	-7,2	-55,3	-1,8	-28,2	-122,5	7,0	35,4	-63,5
1982	0,7	7,1	-6,9	-46,4	-2,4	-33,5	-112,7	4,5	36,1	-56,9
1983	0,7	6,5	-5,8	-44,0	-0,7	-49,7	-111,9	7,9	35,2	-55,2
1984	0,8	11,0	-10,8	-40,9	1,0	-54,5	-112,0	9,5	33,3	-62,7
1985	0,7	4,6	-9,1	-42,3	1,3	-53,5	-103,6	12,0	32,3	-64,8
1986	0,9	9,8	-8,2	-41,7	1,2	-56,2	-136,8	14,0	32,5	-86,5
1987	0,9	8,5	-5,9	-38,5	1,7	-52,5	-150,3	20,5	29,1	-98,4
1988	0,8	9,1	-3,7	-29,8	2,3	-56,8	-146,7	22,2	26,2	-98,4
1989	0,8	11,0	-6,3	-31,3	2,6	-55,1	-143,3	20,5	25,1	-122,4
1990	0,9	15,4	-0,3	-41,6	-0,2	-53,6	-112,0	22,7	24,6	-105,6

Table 2.65 PRODUCTIVITY IN SERBIA:
RATIO OF DIFFERENTIAL SHIFT AND REAL GDP

In %

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-1.0	13.6	51.8	-16.3	-0.6	3.2	8.8	0.0	-10.2	-13.1
1966	-4.8	15.6	35.6	-6.4	-9.1	-0.2	11.6	-2.8	-11.0	-12.4
1967	-5.5	12.3	22.9	-5.1	-10.4	2.1	9.2	-5.4	-10.5	-10.7
1968	-6.5	11.8	33.2	-4.1	-12.6	0.1	9.5	-7.1	-8.8	-11.1
1969	-7.3	10.6	28.2	-3.3	-12.4	-3.2	6.7	-8.0	-8.6	-13.3
1970	-8.1	1.5	17.6	-8.0	-12.6	-2.5	7.8	-8.6	-6.9	-17.4
1971	-7.9	4.3	20.7	-7.2	-10.1	-7.1	7.1	-11.6	-7.8	-17.5
1972	-7.8	5.4	15.2	-11.6	-9.6	-10.8	8.8	-10.1	-7.0	-19.0
1973	-6.4	6.2	7.6	-16.8	-7.8	-7.6	7.0	-9.9	-6.1	-17.3
1974.	-6.3	2.2	17.9	-22.7	-7.3	-7.1	6.6	-9.2	-6.2	-11.5
1975	-5.7	4.4	23.5	-21.0	-5.8	-7.1	-10.3	-8.3	-6.4	-10.8
1976	-4.7	3.4	17.8	-22.3	-4.4	-3.3	-11.9	-9.4	-6.3	-5.2
1977	-3.9	9.3	24.7	-15.6	-3.8	-3.2	-21.9	-9.7	-5.1	-8.5
1978	-4.7	3.3	29.2	-18.6	-4.7	-3.6	-16.5	-10.3	-4.2	-9.0
1979	-4.5	-0.1	25.7	-22.0	-4.5	-3.8	-10.1	-12.1	-2.7	-6.3
1980	-4.3	2.4	33.9	-29.1	-2.7	-2.8	-16.5	-27.1	-1.1	-13.3
1981	-3.7	1.2	32.5	-29.3	-2.6	-4.2	-15.5	-21.7	0.8	-13.5
1982	-2.9	1.1	28.6	-29.9	-1.7	-1.4	-16.7	-23.5	1.6	-10.2
1983	-3.1	2.0	28.2	-37.9	-1.5	-3.5	-17.5	-24.5	1.4	-12.6
1984	-3.3	3.4	28.1	-39.4	-0.9	-1.5	-17.2	-24.1	-2.0	-16.0
1985	-3.5	3.7	30.3	-38.8	-1.0	-0.8	-15.4	-24.6	-1.6	-24.9
1986	-3.6	3.0	32.3	-32.2	-1.4	-3.4	-15.4	-22.1	-1.3	-27.7
1987	-3.7	4.3	31.5	-33.0	-1.8	-3.4	-12.3	-21.0	-1.6	-28.7
1988	-3.8	4.1	29.5	-31.2	-1.3	-4.9	-9.8	-24.2	-1.0	-34.3
1989	-2.3	5.9	29.7	-32.9	-0.9	-7.0	-13.3	-14.6	-0.1	-11.3
1990	-1.5	5.4	30.1	-40.1	-1.4	-4.7	-6.4	-14.4	4.0	-10.2

In only two sectors – water management and trade – real GDP was in every year of the surveyed period higher than hypothetical. In the case of water management this was the result of higher sectoral labor productivity (a positive differential shift) whose effects prevailed over the influence of the negative structural shift (in all 18 years in which this sector at the level of Yugoslavia had below-average productiv-

ity). The situation in trade was the reverse: this sector's real GDP exceeded hypothetical owing to a positive structural shift. The positive influence of structure in this case exceeded the consequences of lower sectoral productivity in trade (this sector had a positive differential shift in only four years – 1981, 1982, 1983 and 1990).

In addition to water management, agriculture, too, had a positive differential shift during every year of the surveyed period, i.e. higher sectoral productivity. During five years, however (1965, 1966, 1970, 1975 and 1979), it was not enough to counter the negative effects of the structural shift.

During five years each (the manufacturing in 1984, 1985, 1988, and 1989, and transport and communication in 1965, 1966, 1967, 1989 and 1990) the manufacturing and transport and communication both achieved higher than hypothetical real GDP. In both sectors this was the result of a positive structural shift, because both had lower sectoral labor productivity (the differential shift was negative) in all of the other years.

Forestry, construction and artisanship had no real GDP higher than hypothetical in any of the observed years. In the case of forestry, this was a cumulative consequence of the negative structural and negative differential shift throughout the surveyed period. Construction's higher sectoral productivity during three years (1965, 1967 and 1968) was insufficient to annul the effects of the continuously negative structural shift. Employees in artisanship achieved labor productivity in the first ten years of the surveyed period (1965-1974) that was higher than the Yugoslav average, but in these years the negative structural shift had a prevailing effect.

Table 2.66 PRODUCTIVITY IN SERBIA: NET DIFFERENTIAL SHIFT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-512	351	185	-121	-114	172	86	1	-873	-198
1966	-2476	524	122	-55	-1798	-12	121	-138	-1035	-205
1967	-2899	413	68	-44	-2056	132	93	-272	-1059	-174
1968	-3529	393	114	-35	-2587	9	102	-375	-949	-201
1969	-4315	379	98	-29	-2843	-222	74	-463	-1046	-264
1970	-5009	45	51	-69	-3110	-193	94	-532	-944	-349
1971	-5379	162	74	-64	-2794	-531	89	-762	-1183	-371
1972	-5600	206	51	-101	-2854	-792	120	-685	-1140	-406
1973	-4918	254	25	-143	-2470	-553	98	-719	-1029	-382
1974	-5195	97	73	-192	-2578	-553	98	-742	-1115	-282
1975	-4968	181	96	-184	-2178	-623	-154	-671	-1162	-273
1976	-4275	157	75	-190	-1742	-316	-184	-767	-1165	-143
1977	-3947	488	130	-152	-1639	-335	-330	-838	-1029	-241

1978	-4991	164	165	-177	-2238	-431	-282	-980	-941	-270
1979	-5147	-6	141	-209	-2335	-499	-192	-1181	-658	-208
1980	-5172	128	214	-252	-1473	-368	-306	-2418	-281	-415
1981	-4563	67	206	-266	-1481	-528	-297	-2046	205	-424
1982	-3599	65	174	-287	-991	-164	-330	-2124	397	-339
1983	-3904	119	171	-343	-870	-342	-346	-2221	342	-414
1984	-4281	224	167	-365	-565	-140	-346	-2277	-461	-518
1985	-4526	237	188	-363	-641	-77	-325	-2401	-376	-768
1986	-4774	201	209	-315	-904	-307	-291	-2287	-307	-774
1987	-4950	292	208	-320	-1201	-312	-217	-2291	-356	-752
1988	-5001	278	189	-311	-877	-407	-177	-2594	-214	-888
1989	-3128	426	184	-315	-619	-557	-235	-1705	-17	-289
1990	-2039	371	174	-312	-853	-333	-104	-1571	833	-245

Table 2.67 PRODUCTIVITY IN SERBIA: ALLOCATION EFFECT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	53	181	-49	70	5	-7	-4	-0	-141	-2
1966	174	226	-6	35	38	0	-12	12	-123	5
1967	170	185	6	28	43	-4	-9	18	-105	7
1968	161	162	-9	23	49	0	-11	17	-79	9
1969	186	159	-1	19	53	-5	-7	25	-72	16
1970	87	19	1	44	46	-3	-9	23	-60	27
1971	119	68	1	41	39	-2	-8	16	-74	37
1972	156	80	4	62	31	-13	-12	18	-63	48
1973	214	98	4	86	24	-3	-8	15	-52	51
1974	167	39	0	111	19	0	-8	19	-53	40
1975	190	70	-6	107	20	-3	12	18	-64	36
1976	171	58	-3	109	25	-8	12	14	-56	20
1977	247	157	-7	91	28	-9	-8	10	-41	26
1978	183	54	-19	104	29	-19	8	14	-19	31
1979	143	-2	-13	121	24	-18	6	17	-15	23
1980	233	37	-26	142	18	-13	3	30	-8	50
1981	241	19	-23	149	12	-15	7	29	7	56

1982	256	19	-9	162	9	-4	9	14	12	44
1983	289	31	-7	189	7	-8	8	3	10	56
1984	322	57	-8	200	4	-3	7	2	-19	82
1985	377	59	-17	199	2	-2	12	8	-13	130
1986	347	50	-23	171	1	-7	9	11	-11	146
1987	381	66	-21	177	-5	-6	8	32	-12	144
1988	456	64	-20	168	-9	-10	8	63	-5	197
1989	341	97	-19	166	-4	-20	6	51	-0	64
1990	346	86	-20	149	-3	-13	2	58	27	60

Table 2.68 PRODUCTIVITY IN SERBIA: TYPES OF ALLOCATION EFFECT

Year	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	4	3	2	2	3	3	3	1	1
1966	4	3	2	2	2	3	2	1	2
1967	4	4	2	2	3	3	2	1	2
1968	4	3	2	2	4	3	2	1	2
1969	4	3	2	2	1	3	2	1	2
1970.	4	4	2	2	1	3	2	1	2
1971	4	4	2	2	1	3	2	1	2
1972	4	4	2	2	1	3	2	1	2
1973	4	4	2	2	1	3	2	1	2
1974	4	4	2	2	2	3	2	1	2
1975	4	3	2	2	1	2	2	1	2
1976	4	3	2	2	1	2	2	1	2
1977	4	3	2	2	1	1	2	1	2
1978	4	3	2	2	1	2	2	1	2
1979	4	3	2	2	1	2	2	1	2
1980	4	3	2	2	1	2	2	1	2
1981	4	3	2	2	1	2	2	4	2
1982	4	3	2	2	1	2	2	4	2
1983	4	3	2	2	1	2	2	4	2
1984	4	3	2	2	1	2	2	1	2
1985	4	3	2	2	1	2	2	1	2
1986	4	3	2	2	1	2	2	1	2

1987	4	3	2	1	1	2	2	1	2
1988	4	3	2	1	1	2	2	1	2
1989	4	3	2	1	1	2	2	1	2
1990	4	3	2	1	1	2	2	4	2

Agriculture is the only sector in Serbia which in every year of the surveyed period had above-average sectoral productivity and above-average share in employment, being continuously of the Type 4 allocation effect (*Table 2.68*).

Water management was another sector in Serbia that showed constantly above-average productivity, i.e. appeared as comparatively good and specialized in six years (1967 and from 1970 to 1974) during which it was characterized by the Type 4 allocation effect. In the remaining years it was Type 3.

During the entire analyzed period construction had a negative structural shift owing to its lower productivity relative to the Yugoslav economy's average total. In this sector, Serbia, for the most part, appeared as comparatively bad. Since Serbia specialized in this sector for as many as 21 years (1969-1973 and 1975-1990 – Type 1 allocation effect), this is yet another indicator of the republic's poor production orientation.

Although trade was characterized by the Type 1 allocation effect during the entire surveyed period (except for four years – 1981, 1982, 1983 and 1990), specialization in this sector (which figured as comparatively bad) cannot be described as a total failure owing to a positive structural shift it had throughout the analyzed period.

The transport and communication sector (which also had a positive structural shift throughout the surveyed period) was not characterized by above-average share in the number of employed, nor did the republic in this sector fare comparatively well from the point of view of productivity (except in 1965). This means that, from 1966 to 1990, this sector was marked by the Type 2 allocation effect and Type 1 in 1965. This is the reason why the sector's positive structural shift was exceeded by a negative differential shift (*Table 2.65* and *2.65*).

Non-specialization in forestry and artisanship may be described as a favorable orientation, because these two sectors showed below-average productivity compared to the Yugoslav average throughout the surveyed period. As for forestry, it was not a comparatively good sector either, and was characterized during the entire period by the Type 2 allocation effect. Artisanship, on the other hand, had above-average sectoral productivity in the first ten years, being marked by the Type 3 allocation effect, whereas in the remaining years, when sectoral productivity dropped below the Yugoslav average, it became a Type 2 sector. The only year in which this sector appeared as specialized was 1977 and was, therefore, Type 1.

The manufacturing and catering and tourism had below-average sectoral productivity during the entire analyzed period, with a negative structural shift for the

greater part. For that reason, it is good that they became specialized in only four years (the manufacturing in 1987-1990), i.e. one (catering and tourism in 1965). Logically, they were marked by the Type 1 allocation effect during these years, and in the others – Type 2.

Central Serbia

The trends in Serbia's GDP in the social sector are given in *Table 2.59*. The data on labor productivity in central Serbia (*Table 2.70*) shows that "the most productive" years in this territory are the same as for Serbia as a whole – 1979 and 1980. During this time employees in the economy of central Serbia produced on average 70,000 dinars of GDP. In 1965, however, as well as in all of the regions analyzed so far, employees were the least productive and contributed almost one-third less to GDP, or 46,000 dinars on average.

In the averagely most productive trade sector, employees produced on average 93,000 dinars of this sector's GDP, while in the averagely least productive sector of artisanship almost four times less – 29,000 dinars.

Given that central Serbia had the biggest weight (ponder) in Serbia's summed results, the end results of this analysis for these two areas are very similar: a continuously smaller GDP than hypothetical (the exception are the initial and final two years – 1965 and 1966, and 1989 and 1990, respectively), owing to the differential shift's negative influence (this shift was positive only in 1965, 1989-1990) being higher than the positive structural shift (*Tables 2.74, 2.75 and 2.76*). A tendency of approaching the Yugoslav average which was registered at the level of Serbia, is more noticeable when it comes to the sectoral structure of employed (the positive structural shift ranged from 3.8% in 1965 to 0.2% of GDP in 1988).

Only trade had a real GDP higher than hypothetical in the surveyed period, primarily owing, much like the case in Serbia as a whole, to the sector's positive structural shift. The sector achieved a positive differential shift only in the final five years (1986-1990). Water management, the only sector in central Serbia with a positive differential shift throughout the surveyed period, had real GDP higher than hypothetical during all of these years, except for 1979 when the negative structural shift prevailed over the positive differential shift's effects.

Table 2.69 CENTRAL SERBIA: GDP OF THE SOCIAL SECTOR

In 1972 prices

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	29622	881	123	200	12571	3989	665	3033	7021	1140
1966	30945	1125	157	204	12719	4208	678	3202	7447	1206
1967	31800	1082	151	202	12695	4569	668	3423	7830	1179
1968	33641	1095	153	198	13349	4937	705	3676	8203	1325
1969	37264	1211	169	199	14937	5397	744	3954	9210	1442
1970	40224	1052	147	207	16079	5849	792	4346	10309	1443
1971	43399	1271	177	211	18061	5288	834	4687	11398	1472
1972	45839	1370	191	215	19438	5230	898	4874	12168	1455
1973	47946	1347	188	220	20792	5146	943	5240	12594	1477
1974	52111	1426	199	230	22984	5424	1008	5775	13457	1608
1975	54548	1312	183	236	24665	6125	954	5775	13616	1682
1976	57231	1437	200	233	25970	7013	1001	5891	13678	1808
1977	62277	1637	246	254	28413	7715	1069	6268	14745	1931
1978	68809	1623	246	251	31356	8972	1146	6893	16273	2049
1979	74417	1713	233	263	34215	9855	1264	7155	17515	2204
1980	76505	1759	300	251	36350	9827	1283	6461	18227	2048
1981	76878	1779	305	258	38046	8843	1308	6771	17545	2023
1982	77026	2060	305	283	38349	8357	1363	6500	17668	2141
1983	75672	2134	308	270	38755	6903	1377	6565	17315	2045
1984	77768	2292	302	277	41428	6758	1404	6828	16535	1944
1985	79381	2205	299	274	42738	6893	1431	6973	16715	1853
1986	81626	2458	305	300	44367	6655	1322	7408	17149	1662
1987	81139	2422	320	279	44502	6840	1222	7807	16191	1556
1988	80373	2343	302	287	45097	6203	1244	7932	15494	1471
1989	82825	2821	287	278	45755	6346	1299	8749	15791	1499
1990	75967	2713	267	258	40737	5900	1207	8362	15140	1383

Table 2.70 CENTRAL SERBIA: LABOR PRODUCTIVITY

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	0,046	0,037	0,096	0,032	0,038	0,045	0,025	0,051	0,085	0,046
1966	0,048	0,047	0,129	0,034	0,039	0,046	0,026	0,053	0,089	0,048
1967	0,049	0,045	0,118	0,038	0,039	0,050	0,026	0,054	0,092	0,046
1968	0,051	0,049	0,117	0,040	0,040	0,050	0,028	0,054	0,094	0,051
1969	0,053	0,055	0,100	0,039	0,043	0,049	0,027	0,057	0,101	0,053
1970	0,055	0,049	0,075	0,039	0,044	0,052	0,028	0,060	0,105	0,050
1971	0,056	0,058	0,092	0,039	0,047	0,046	0,028	0,061	0,108	0,048
1972	0,057	0,063	0,078	0,038	0,048	0,045	0,030	0,061	0,110	0,045
1973	0,059	0,061	0,066	0,038	0,050	0,046	0,032	0,064	0,110	0,044
1974	0,061	0,062	0,071	0,037	0,053	0,047	0,033	0,069	0,112	0,045
1975	0,061	0,055	0,079	0,037	0,054	0,049	0,030	0,066	0,107	0,044
1976	0,062	0,061	0,078	0,038	0,056	0,053	0,031	0,065	0,105	0,046
1977	0,065	0,071	0,081	0,045	0,059	0,053	0,029	0,067	0,111	0,045
1978	0,068	0,063	0,078	0,040	0,062	0,057	0,030	0,071	0,118	0,046
1979	0,070	0,064	0,070	0,040	0,065	0,059	0,031	0,073	0,118	0,046
1980	0,070	0,064	0,094	0,037	0,067	0,057	0,030	0,064	0,117	0,042
1981	0,068	0,059	0,089	0,037	0,068	0,052	0,029	0,066	0,109	0,040
1982	0,067	0,065	0,082	0,039	0,066	0,050	0,030	0,062	0,109	0,041
1983	0,065	0,064	0,081	0,037	0,065	0,043	0,030	0,061	0,105	0,039
1984	0,065	0,066	0,082	0,037	0,068	0,043	0,031	0,062	0,098	0,036
1985	0,065	0,062	0,083	0,036	0,067	0,043	0,032	0,062	0,097	0,034
1986	0,065	0,067	0,087	0,039	0,067	0,042	0,029	0,065	0,099	0,031
1987	0,063	0,066	0,089	0,037	0,064	0,043	0,027	0,069	0,092	0,028
1988	0,062	0,062	0,086	0,038	0,064	0,041	0,027	0,069	0,088	0,027
1989	0,064	0,074	0,084	0,037	0,065	0,043	0,028	0,077	0,090	0,028
1990	0,060	0,071	0,091	0,030	0,059	0,041	0,031	0,075	0,087	0,028

Table 2.71 PRODUCTIVITY IN CENTRAL SERBIA: HYPOTHETICAL GDP

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	27600	1027	55	269	14123	3821	1149	2544	3551	1060
1966	30924	1141	59	285	15672	4405	1235	2899	4028	1202
1967	32355	1187	64	263	16309	4564	1274	3162	4251	1281
1968	34879	1180	69	260	17407	5144	1341	3560	4560	1358
1969	39148	1222	93	286	19472	6068	1532	3872	5079	1523
1970	42520	1249	113	309	21178	6548	1612	4199	5644	1668
1971	46399	1318	116	322	23188	6860	1769	4646	6325	1855
1972	48760	1313	149	340	24578	7018	1803	4874	6731	1955
1973	50546	1359	176	359	25679	6887	1830	5068	7107	2081
1974	55176	1473	182	405	28216	7422	1993	5393	7786	2305
1975	57239	1527	149	413	29002	7951	2028	5595	8137	2437
1976	59297	1519	163	398	29882	8550	2061	5806	8384	2534
1977	64394	1542	204	375	32149	9658	2452	6282	8894	2838
1978	71166	1797	221	440	35351	11069	2681	6808	9678	3119
1979	76773	1920	240	472	38050	12021	2888	7099	10663	3419
1980	78753	1969	229	491	38719	12338	3096	7275	11135	3501
1981	79771	2107	240	494	39694	12010	3136	7238	11298	3553
1982	79302	2172	254	495	39919	11409	3100	7244	11155	3553
1983	78294	2209	254	487	39834	10758	3036	7214	10991	3510
1984	80198	2328	248	503	41172	10613	3053	7366	11318	3596
1985	81555	2369	239	504	42434	10592	2986	7446	11415	3570
1986	83703	2437	232	511	44183	10559	3075	7591	11562	3553
1987	83498	2372	233	491	44984	10233	2915	7298	11435	3536
1988	82752	2390	223	483	45060	9726	2899	7260	11246	3465
1989	82621	2432	219	486	45056	9455	2967	7271	11265	3469
1990	75282	2292	176	514	41381	8535	2346	6651	10411	2976

Table 2.72 PRODUCTIVITY IN CENTRAL SERBIA: STRUCTURAL SHIFT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	1117	-322	5	-89	-1468	-372	-616	242	3594	144
1966	889	-210	4	-92	-1609	-471	-693	152	3733	77
1967	768	-144	-7	-72	-2064	-347	-725	220	3954	-48
1968	670	-128	4	-74	-2102	-507	-747	189	4010	24
1969	582	-76	2	-98	-2311	-742	-877	198	4465	21
1970	702	-166	-11	-100	-2489	-769	-923	261	4967	-67
1971	580	18	-3	-113	-2709	-1174	-1022	280	5503	-201
1972	567	-25	-14	-115	-2655	-1233	-1002	190	5715	-295
1973	469	39	-19	-119	-2729	-1373	-973	390	5654	-401
1974	468	74	2	-139	-2704	-1640	-1060	571	5919	-553
1975	662	-94	-5	-141	-2287	-1402	-929	349	5777	-605
1976	428	66	5	-130	-2252	-1456	-924	277	5523	-679
1977	265	106	6	-108	-2198	-1699	-1150	163	6000	-856
1978	369	-8	-20	-139	-2329	-1843	-1344	356	6707	-1011
1979	443	-6	-31	-147	-2090	-1927	-1491	310	6969	-1144
1980	415	-6	-24	-160	-1489	-2261	-1607	407	6772	-1216
1981	408	-12	-23	-148	-686	-2556	-1614	445	6277	-1274
1982	269	168	-23	-130	-929	-2833	-1523	276	6472	-1210
1983	215	156	-19	-118	-275	-3489	-1481	486	6109	-1154
1984	201	298	-32	-114	404	-3709	-1492	614	5495	-1262
1985	328	120	-28	-118	544	-3672	-1413	791	5324	-1220
1986	265	274	-25	-123	523	-3719	-1667	983	5455	-1435
1987	294	231	-18	-110	750	-3445	-1669	1490	4598	-1532
1988	188	252	-11	-89	1059	-3417	-1658	1577	3942	-1466
1989	59	323	-18	-93	1177	-3212	-1657	1587	3770	-1818
1990	-54	446	-1	-118	-73	-2889	-1203	1649	3591	-1456
1989	145	66	86	-115	-478	103	-11	-109	755	-153
1990	739	-25	92	-138	-572	254	64	62	1138	-137

Table 2.73 PRODUCTIVITY IN CENTRAL SERBIA: DIFFERENTIAL SHIFT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	905	176	63	20	-84	540	131	246	-123	-65
1966	-869	194	94	11	-1343	274	136	151	-313	-73
1967	-1324	39	94	11	-1550	352	119	41	-376	-54
1968	-1908	43	80	12	-1956	300	111	-73	-367	-58
1969	-2466	65	74	10	-2225	72	88	-115	-334	-102
1970	-2998	-32	46	-1	-2609	69	102	-114	-301	-158
1971	-3580	-65	65	2	-2418	-399	87	-240	-430	-182
1972	-3489	82	56	-10	-2485	-556	97	-190	-278	-205
1973	-3069	-51	31	-20	-2158	-369	85	-218	-167	-203
1974	-3533	-121	16	-36	-2527	-358	75	-189	-248	-144
1975	-3353	-121	40	-37	-2050	-424	-145	-169	-298	-150
1976	-2494	-147	31	-34	-1660	-81	-136	-192	-229	-46
1977	-2381	-11	36	-12	-1538	-244	-233	-178	-149	-51
1978	-2726	-167	45	-50	-1666	-254	-191	-271	-112	-59
1979	-2798	-201	23	-62	-1745	-239	-133	-254	-117	-71
1980	-2663	-204	95	-80	-880	-250	-206	-1220	319	-237
1981	-3301	-316	88	-88	-962	-611	-214	-912	-30	-256
1982	-2545	-279	73	-82	-642	-219	-214	-1020	41	-203
1983	-2837	-231	73	-99	-804	-366	-178	-1135	215	-311
1984	-2631	-334	86	-112	-148	-146	-157	-1152	-278	-390
1985	-2502	-284	88	-112	-240	-27	-142	-1264	-23	-497
1986	-2342	-253	98	-89	-338	-185	-86	-1166	132	-456
1987	-2653	-181	106	-102	-1232	52	-25	-981	158	-448
1988	-2566	-299	91	-107	-1022	-106	3	-905	306	-528
1989	145	66	86	-115	-478	103	-11	-109	755	-153
1990	739	-25	92	-138	-572	254	64	62	1138	-137

Table 2.74 PRODUCTIVITY IN CENTRAL SERBIA:
RATIO OF HYPOTHETICAL AND REAL GDP

In %

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	93.2	116.6	44.7	134.5	112.3	95.8	172.9	83.9	50.6	93.1
1966	99.9	101.5	37.4	139.6	123.2	104.7	182.2	90.5	54.1	99.7
1967	101.7	109.7	42.1	130.2	128.5	99.9	190.8	92.4	54.3	108.6
1968	103.7	107.7	44.9	131.5	130.4	104.2	190.2	96.8	55.6	102.5
1969	105.1	101.0	55.2	143.8	130.4	112.4	205.9	97.9	55.1	105.6
1970	105.7	118.8	76.7	149.2	131.7	112.0	203.7	96.6	54.7	115.6
1971	106.9	103.7	65.3	152.4	128.4	129.7	212.0	99.1	55.5	126.0
1972	106.4	95.8	78.1	157.9	126.4	134.2	200.8	100.0	55.3	134.4
1973	105.4	100.9	93.8	163.2	123.5	133.8	194.1	96.7	56.4	140.9
1974	105.9	103.3	91.3	176.2	122.8	136.8	197.7	93.4	57.9	143.3
1975	104.9	116.4	81.3	175.1	117.6	129.8	212.6	96.9	59.8	144.9
1976	103.6	105.7	81.7	170.7	115.1	121.9	206.0	98.6	61.3	140.1
1977	103.4	94.2	82.9	147.5	113.1	125.2	229.3	100.2	60.3	146.9
1978	103.4	110.7	90.0	175.4	112.7	123.4	233.9	98.8	59.5	152.2
1979	103.2	112.1	103.1	179.5	111.2	122.0	228.5	99.2	60.9	155.1
1980	102.9	111.9	76.4	195.6	106.5	125.6	241.3	112.6	61.1	170.9
1981	103.8	118.5	78.8	191.7	104.3	135.8	239.8	106.9	64.4	175.6
1982	103.0	105.4	83.4	174.9	104.1	136.5	227.4	111.5	63.1	166.0
1983	103.5	103.5	82.3	180.4	102.8	155.8	220.5	109.9	63.5	171.7
1984	103.1	101.6	82.2	181.6	99.4	157.0	217.4	107.9	68.4	185.0
1985	102.7	107.4	79.9	184.1	99.3	153.7	208.7	106.8	68.3	192.7
1986	102.5	99.2	76.2	170.5	99.6	158.7	232.6	102.5	67.4	213.8
1987	102.9	98.0	72.7	176.1	101.1	149.6	238.6	93.5	70.6	227.2
1988	103.0	102.0	73.7	168.3	99.9	156.8	233.0	91.5	72.6	235.5
1989	99.8	86.2	76.2	174.8	98.5	149.0	228.4	83.1	71.3	231.4
1990	99.1	84.5	65.8	199.2	101.6	144.7	194.3	79.5	68.8	215.2

Table 2.75 PRODUCTIVITY IN CENTRAL SERBIA:
RATIO OF STRUCTURAL SHIFT AND REAL GDP

In %

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	3.8	-36.5	3.7	-44.6	-11.7	-9.3	-92.6	8.0	51.2	12.6
1966	2.9	-18.7	2.6	-44.9	-12.7	-11.2	-102.3	4.7	50.1	6.3
1967	2.4	-13.3	-4.4	-35.8	-16.3	-7.6	-108.5	6.4	50.5	-4.0
1968	2.0	-11.7	2.9	-37.6	-15.7	-10.3	-106.0	5.1	48.9	1.8
1969	1.6	-6.3	1.0	-49.0	-15.5	-13.8	-117.8	5.0	48.5	1.5
1970	1.7	-15.8	-7.7	-48.4	-15.5	-13.1	-116.6	6.0	48.2	-4.6
1971	1.3	1.4	-1.7	-53.5	-15.0	-22.2	-122.4	6.0	48.3	-13.6
1972	1.2	-1.8	-7.3	-53.5	-13.7	-23.6	-111.7	3.9	47.0	-20.2
1973	1.0	2.9	-10.2	-54.2	-13.1	-26.7	-103.2	7.4	44.9	-27.1
1974	0.9	5.2	0.9	-60.4	-11.8	-30.2	-105.2	9.9	44.0	-34.4
1975	1.2	-7.2	-3.0	-59.6	-9.3	-22.9	-97.4	6.0	42.4	-36.0
1976	0.7	4.6	2.7	-55.9	-8.7	-20.8	-92.3	4.7	40.4	-37.6
1977	0.4	6.5	2.4	-42.7	-7.7	-22.0	-107.5	2.6	40.7	-44.3
1978	0.5	-0.5	-8.2	-55.4	-7.4	-20.5	-117.3	5.2	41.2	-49.3
1979	0.6	-0.4	-13.2	-56.0	-6.1	-19.6	-118.0	4.3	39.8	-51.9
1980	0.5	-0.4	-8.1	-63.9	-4.1	-23.0	-125.3	6.3	37.2	-59.4
1981	0.5	-0.7	-7.6	-57.4	-1.8	-28.9	-123.4	6.6	35.8	-63.0
1982	0.3	8.1	-7.4	-46.0	-2.4	-33.9	-111.7	4.2	36.6	-56.5
1983	0.3	7.3	-6.2	-43.7	-0.7	-50.5	-107.6	7.4	35.3	-56.4
1984	0.3	13.0	-10.7	-41.2	1.0	-54.9	-106.3	9.0	33.2	-64.9
1985	0.4	5.4	-9.2	-43.0	1.3	-53.3	-98.8	11.3	31.9	-65.9
1986	0.3	11.1	-8.2	-40.9	1.2	-55.9	-126.1	13.3	31.8	-86.3
1987	0.4	9.5	-5.8	-39.5	1.7	-50.4	-136.6	19.1	28.4	-98.5
1988	0.2	10.8	-3.6	-31.2	2.3	-55.1	-133.3	19.9	25.4	-99.6
1989	0.1	11.4	-6.2	-33.3	2.6	-50.6	-127.6	18.1	23.9	-121.2
1990	-0.1	16.4	-0.3	-45.6	-0.2	-49.0	-99.7	19.7	23.7	-105.3

Table 2.76 PRODUCTIVITY IN CENTRAL SERBIA:
RATIO OF DIFFERENTIAL SHIFT AND REAL GDP

In %

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	3.1	19.9	51.6	10.1	-0.7	13.5	19.7	8.1	-1.8	-5.7
1966	-2.8	17.2	60.0	5.3	-10.6	6.5	20.1	4.7	-4.2	-6.1
1967	-4.2	3.6	62.3	5.7	-12.2	7.7	17.8	1.2	-4.8	-4.6
1968	-5.7	3.9	52.1	6.1	-14.7	6.1	15.8	-2.0	-4.5	-4.4
1969	-6.6	5.4	43.8	5.2	-14.9	1.3	11.9	-2.9	-3.6	-7.0
1970	-7.5	-3.0	31.1	-0.7	-16.2	1.2	12.9	-2.6	-2.9	-11.0
1971	-8.2	-5.1	36.4	1.0	-13.4	-7.5	10.4	-5.1	-3.8	-12.4
1972	-7.6	6.0	29.3	-4.5	-12.8	-10.6	10.9	-3.9	-2.3	-14.1
1973	-6.4	-3.8	16.4	-9.0	-10.4	-7.2	9.1	-4.2	-1.3	-13.8
1974	-6.8	-8.5	7.8	-15.8	-11.0	-6.6	7.5	-3.3	-1.8	-8.9
1975	-6.1	-9.2	21.7	-15.5	-8.3	-6.9	-15.2	-2.9	-2.2	-8.9
1976	-4.4	-10.3	15.6	-14.8	-6.4	-1.2	-13.6	-3.3	-1.7	-2.5
1977	-3.8	-0.7	14.7	-4.8	-5.4	-3.2	-21.8	-2.8	-1.0	-2.6
1978	-4.0	-10.3	18.2	-20.0	-5.3	-2.8	-16.6	-3.9	-0.7	-2.9
1979	-3.8	-11.7	10.1	-23.5	-5.1	-2.4	-10.5	-3.6	-0.7	-3.2
1980	-3.5	-11.6	31.7	-31.8	-2.4	-2.5	-16.0	-18.9	1.8	-11.6
1981	-4.3	-17.8	28.8	-34.2	-2.5	-6.9	-16.4	-13.5	-0.2	-12.7
1982	-3.3	-13.6	24.0	-28.8	-1.7	-2.6	-15.7	-15.7	0.2	-9.5
1983	-3.7	-10.8	23.8	-36.8	-2.1	-5.3	-12.9	-17.3	1.2	-15.2
1984	-3.4	-14.6	28.5	-40.5	-0.4	-2.2	-11.2	-16.9	-1.7	-20.1
1985	-3.2	-12.9	29.3	-41.1	-0.6	-0.4	-9.9	-18.1	-0.1	-26.8
1986	-2.9	-10.3	32.0	-29.6	-0.8	-2.8	-6.5	-15.7	0.8	-27.5
1987	-3.3	-7.5	33.0	-36.5	-2.8	0.8	-2.0	-12.6	1.0	-28.8
1988	-3.2	-12.8	30.0	-37.2	-2.3	-1.7	0.2	-11.4	2.0	-35.9
1989	0.2	2.4	30.0	-41.5	-1.0	1.6	-0.8	-1.2	4.8	-10.2
1990	1.0	-0.9	34.5	-53.6	-1.4	4.3	5.3	0.7	7.5	-9.9

From the point of view of the ratio of real and hypothetical GDP, only transport and communication could be considered as a relatively productive sector: in 17 years (1965-1971, 1973-1976, 1978-1979 and 1987-1990) the sector's employees achieved a real GDP higher than the hypothetical value. This was also the case with the catering and tourism sector, but only during two years – in 1965 and 1966.

During all of the surveyed years the manufacturing and catering and tourism had smaller sectoral productivity than the Yugoslav average in the same sectors. They achieved this owing to a higher positive structural shift during these years. The same goes for agriculture, although this sector, from 1965 to 1969, and in 1972, had above-average productivity, but it was not enough to prevail over the structural shift's negative effects.

Construction had a positive differential shift from 1965 to 1969, but only in 1965 and 1967 was it big enough to prevail over the structural shift's negative effects, which characterized this sector throughout the surveyed period.

Real GDP in the forestry sector was below hypothetical during the entire period, although in the 1965-1969 period and in 1971, this sector had a positive differential shift.

Table 2.77 PRODUCTIVITY IN CENTRAL SERBIA: NET DIFFERENTIAL SHIFT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	1154	337	111	59	-81	504	132	247	-99	-56
1966	-466	68	206	32	-1289	249	144	154	-264	-66
1967	-1043	69	237	34	-1500	323	125	41	-322	-50
1968	-1685	77	160	37	-1902	275	117	-71	-324	-54
1969	-2250	118	127	32	-2169	64	91	-114	-303	-96
1970	-2905	-58	70	-4	-2543	63	107	-113	-274	-153
1971	-3444	-117	107	7	-2356	-369	89	-233	-392	-180
1972	-3282	150	77	-27	-2422	-514	100	-185	-255	-207
1973	-3043	-92	39	-54	-2106	-344	85	-211	-155	-206
1974	-3579	-219	19	-93	-2460	-341	74	-183	-229	-147
1975	-3393	-218	57	-93	-2011	-399	-142	-163	-273	-150
1976	-2605	-271	42	-88	-1634	-74	-136	-185	-211	-47
1977	-2339	-22	45	-34	-1528	-220	-217	-172	-139	-52
1978	-2860	-295	59	-124	-1655	-226	-188	-264	-106	-61
1979	-2981	-353	30	-146	-1733	-215	-132	-249	-110	-73
1980	-2851	-354	128	-179	-879	-226	-199	-1198	299	-244
1981	-3531	-529	115	-199	-957	-557	-207	-905	-28	-266
1982	-2776	-461	91	-185	-636	-202	-208	-1003	38	-210
1983	-3044	-379	90	-222	-795	-338	-176	-1102	201	-324
1984	-2907	-542	112	-246	-146	-136	-157	-1118	-258	-416
1985	-2797	-460	118	-250	-236	-25	-146	-1236	-22	-540
1986	-2585	-409	137	-196	-331	-169	-88	-1143	124	-511

1987	-2887	-301	148	-230	-1196	48	-26	-979	148	-500
1988	-2906	-494	129	-236	-984	-97	3	-908	293	-612
1989	47	108	124	-247	-463	93	-11	-109	727	-175
1990	559	-40	143	-225	-558	225	65	63	1076	-160

Table 2.78 PRODUCTIVITY IN CENTRAL SERBIA: ALLOCATION EFFECT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-249	-161	-48	-39	-3	36	-1	-1	-24	-9
1966	-404	-175	-112	-21	-54	25	-8	-3	-50	-7
1967	-281	-30	-143	-23	-50	29	-6	0	-53	-4
1968	-224	-34	-80	-25	-54	25	-5	-2	-44	-4
1969	-216	-53	-53	-22	-56	8	-3	-1	-32	-5
1970	-93	26	-25	3	-66	7	-5	-1	-28	-5
1971	-136	52	-42	-4	-61	-30	-2	-6	-39	-3
1972	-206	-68	-21	18	-63	-42	-2	-5	-22	1
1973	-26	41	-8	34	-52	-25	0	-8	-13	3
1974	47	98	-3	57	-68	-17	1	-6	-19	3
1975	40	98	-17	56	-39	-25	-3	-6	-26	0
1976	111	124	-11	54	-26	-7	-0	-7	-17	1
1977	-42	10	-9	22	-10	-24	-17	-6	-10	1
1978	134	128	-14	74	-12	-28	-3	-8	-6	2
1979	183	152	-7	84	-12	-24	-1	-5	-7	2
1980	188	150	-33	100	-1	-25	-7	-22	21	6
1981	230	213	-27	110	-5	-54	-7	-7	-2	10
1982	231	181	-17	103	-5	-18	-6	-17	3	7
1983	207	147	-17	123	-9	-28	-2	-34	14	12
1984	276	208	-26	134	-2	-11	0	-34	-20	26
1985	295	176	-31	138	-4	-2	4	-28	-2	43
1986	243	156	-39	107	-7	-16	2	-23	9	54
1987	234	120	-43	128	-37	4	1	-2	10	52
1988	339	195	-38	129	-37	-9	-0	4	13	84
1989	98	-42	-38	132	-15	10	0	1	28	22
1990	180	15	-51	117	-14	29	-1	-1	61	24

Table 2.79 PRODUCTIVITY IN CENTRAL SERBIA:
TYPES OF ALLOCATION EFFECT

Year	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	3	3	3	1	4	3	3	1	1
1966	3	3	3	1	4	3	3	1	1
1967	3	3	3	1	4	3	4	1	1
1968	3	3	3	1	4	3	1	1	1
1969	3	3	3	1	4	3	1	1	1
1970	2	3	2	1	4	3	1	1	1
1971	2	3	3	1	1	3	1	1	1
1972	3	3	2	1	1	3	1	1	2
1973	2	3	2	1	1	4	1	1	2
1974	2	3	2	1	1	4	1	1	2
1975	2	3	2	1	1	1	1	1	2
1976	2	3	2	1	1	1	1	1	2
1977	2	3	2	1	1	1	1	1	2
1978	2	3	2	1	1	1	1	1	2
1979	2	3	2	1	1	1	1	1	2
1980	2	3	2	1	1	1	1	4	2
1981	2	3	2	1	1	1	1	1	2
1982	2	3	2	1	1	1	1	4	2
1983	2	3	2	1	1	1	1	4	2
1984	2	3	2	1	1	2	1	1	2
1985	2	3	2	1	1	2	1	1	2
1986	2	3	2	1	1	2	1	4	2
1987	2	3	2	1	4	2	1	4	2
1988	2	3	2	1	1	3	2	4	2
1989	3	3	2	1	4	2	2	4	2
1990	2	3	2	1	4	3	3	4	2

The economy of central Serbia did not specialize in the only sector that was continuously comparatively good – water management - which made it a Type 3 allocation effect sector during the entire analyzed period (*Table 2.79*).

Specialization in the manufacturing, given its comparatively inferior position, led this sector to being classified as Type 1 the entire time. In addition to the manufacturing, above-average share in employment in the entire period was a character-

istic of construction and trade as well. For this reason, they displayed the Type 1 or Type 4 allocation effect, depending on the achieved relative sectoral productivity. The situation in transport and communication was almost identical: the sector was Type 4 in 1967, and Type 1 from 1968 to 1988. In 1965 and 1966, this sector was comparatively good but not specialized in (Type 3 allocation effect, and in 1988 and 1989, comparatively bad and not specialized in (Type 2 allocation effect)).

Artisanship is a sector that during the surveyed period was marked by all of the types of allocation effect: from 1965 to 1973 and in 1988 and 1990 it was comparatively good but not specialized in (Type 3 allocation effect; in 1974 and 1975 it was specialized in (Type 4 allocation effect); in the 1975-1983 period it was still specialized in but became comparatively bad (Type 1 allocation effect), and from 1984 to 1989, comparatively bad and also unspecialized in (Type 2 allocation effect). Such a situation in a single sector shows an absence of any kind of policy, to say the least.

During the entire surveyed period central Serbia's agriculture was a non-specialized in sector. Furthermore, in the first five years (1965-1969) and in 1989 it had above-average productivity relative to the corresponding sector at the level of Yugoslavia, whereas in all of the other years it was below the Yugoslav average. This made it a Type 3 and Type 2 allocation effect sector, respectively.

Kosovo and Metohia

Kosovo and Metohia's GDP in the social sector is presented in *Table 2.80*, while its labor productivity trends are shown in *Table 2.81*.

A drop in labor productivity, which in all of Yugoslavia's regions occurred at the end of the 1970s, happened somewhat earlier in this province. Kosovo and Metohia's economy reached its peak productivity in 1977, when one worker produced 51,000 dinars of GDP. In the year of the lowest productivity, the province differed from the other regional economies: in 1990 one worker contributed only 31,000 of GDP.

In the surveyed period the averagely most productive sector was water management: one worker contributed 65,000 to the provincial economy's GDP. Artisan-ship, on the other hand, were the least productive sector: productivity per worker amounted to only 13,500 dinars of GDP.

During all 22 years the negative structural shift (0.1% in 1986 and 0.5% in 1988, 1.3% in 1989 and 3.5% in 1990) combined with a negative differential shift, had as a logical consequence a hypothetical GDP higher than real (*Tables 2.85, 2.86 and 2.87*). A combination of above-average share and below-average sectoral productivity led the economy of Kosovo and Metohia to lose from one-fourth (24.4% in 1965) to almost three-fourths (72.1% in 1989) of GDP.

All sectors, except water management, had in the entire surveyed period a negative differential shift, i.e. lower sectoral labor productivity.

Water management, on its part, had a positive differential shift every year except for 1974, 1976, 1987 and 1988. This sector's real GDP exceeded hypothetical in 1965-1872, in 1975, in 1980-1986, and in 1990.

Table 2.80 KOSOVO AND METOHIA : GDP OF THE SOCIAL SECTOR

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	2205	192	16	26	1027	282	29	159	415	60
1966	2430	241	20	26	1126	303	29	168	455	63
1967	2429	231	19	26	1114	287	27	172	493	60
1968	2488	192	16	25	1169	294	28	184	514	67
1969	2732	235	19	25	1229	364	30	199	558	74
1970	3003	208	17	27	1390	414	32	217	627	72
1971	3253	198	16	27	1499	482	36	243	677	76
1972	3539	166	13	28	1725	508	39	255	721	84
1973	3608	160	13	28	1739	530	39	275	731	93
1974	4191	194	16	30	2074	651	42	290	790	105
1975	4640	258	21	30	2338	739	44	301	800	108
1976	4662	265	8	30	2442	645	46	307	800	119
1977	5082	226	22	33	2736	714	50	327	851	124
1978	5352	339	22	32	2809	662	54	364	939	132
1979	5634	263	25	32	2870	800	67	349	1062	167
1980	5883	379	42	30	2801	946	63	332	1139	150
1981	6191	341	40	33	3036	941	68	399	1176	157
1982	6052	440	38	38	2950	785	62	398	1181	160
1983	5832	376	36	34	3072	619	63	387	1092	153
1984	5904	398	36	35	3232	592	64	395	1015	137
1985	6478	366	31	36	3762	613	69	459	1011	131
1986	6741	579	32	34	3823	568	62	494	1043	106
1987	6739	598	33	40	3944	406	58	525	1026	109
1988	6589	671	34	39	3883	352	57	440	981	132
1989	6228	650	40	36	3697	326	57	389	919	114
1990	4614	517	37	24	2701	230	43	258	706	98

Table 2.81 KOSOVO AND METOHIA : LABOR PRODUCTIVITY

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	0,035	0,025	0,092	0,016	0,035	0,029	0,015	0,032	0,064	0,029
1966	0,038	0,034	0,100	0,017	0,038	0,030	0,016	0,035	0,074	0,029
1967	0,038	0,037	0,161	0,020	0,036	0,028	0,015	0,036	0,078	0,028
1968	0,040	0,031	0,098	0,019	0,039	0,030	0,016	0,038	0,080	0,033
1969	0,042	0,041	0,110	0,019	0,039	0,037	0,017	0,042	0,081	0,035
1970	0,045	0,037	0,101	0,019	0,042	0,045	0,018	0,041	0,087	0,033
1971	0,046	0,035	0,090	0,018	0,042	0,047	0,019	0,043	0,085	0,032
1972	0,046	0,033	0,067	0,018	0,045	0,043	0,020	0,040	0,083	0,034
1973	0,046	0,034	0,056	0,017	0,043	0,045	0,020	0,042	0,078	0,036
1974	0,048	0,039	0,049	0,016	0,047	0,050	0,021	0,042	0,078	0,034
1975	0,050	0,046	0,068	0,017	0,049	0,051	0,020	0,040	0,073	0,033
1976	0,048	0,049	0,024	0,016	0,049	0,044	0,019	0,038	0,068	0,034
1977	0,051	0,039	0,087	0,022	0,054	0,048	0,015	0,040	0,074	0,034
1978	0,050	0,054	0,064	0,021	0,053	0,038	0,016	0,043	0,077	0,031
1979	0,049	0,039	0,049	0,021	0,052	0,040	0,018	0,039	0,079	0,038
1980	0,048	0,053	0,104	0,019	0,048	0,044	0,016	0,035	0,077	0,033
1981	0,048	0,045	0,100	0,021	0,048	0,042	0,018	0,039	0,072	0,033
1982	0,045	0,054	0,084	0,024	0,045	0,036	0,015	0,038	0,070	0,032
1983	0,043	0,046	0,081	0,021	0,046	0,029	0,015	0,035	0,063	0,031
1984	0,041	0,049	0,078	0,021	0,045	0,028	0,015	0,034	0,055	0,026
1985	0,044	0,044	0,068	0,021	0,050	0,028	0,015	0,038	0,053	0,024
1986	0,044	0,065	0,068	0,019	0,049	0,027	0,012	0,040	0,052	0,019
1987	0,042	0,064	0,052	0,023	0,049	0,018	0,011	0,040	0,048	0,019
1988	0,040	0,065	0,057	0,022	0,046	0,017	0,011	0,034	0,044	0,024
1989	0,037	0,059	0,060	0,020	0,043	0,016	0,011	0,030	0,39	0,020
1990	0,031	0,049	0,056	0,014	0,034	0,017	0,011	0,023	0,033	0,021

Table 2.82 KOSOVO AND METOHIA : HYPOTHETICAL GDP

In 1972 prices

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	2743	333	7	68	1259	413	83	211	278	90
1966	3085	345	10	72	1441	494	88	234	298	104
1967	3179	310	6	63	1530	517	92	239	314	107
1968	3287	323	9	68	1584	515	92	253	339	106
1969	3568	321	10	72	1760	547	96	264	381	118
1970	3811	326	10	81	1919	530	100	304	418	125
1971	4269	341	11	92	2137	613	111	344	481	140
1972	4644	310	12	97	2333	710	116	386	529	152
1973	4905	290	15	104	2495	726	122	408	583	161
1974	5578	323	21	119	2841	845	132	448	651	198
1975	5969	359	20	114	3027	921	144	478	697	209
1976	6218	345	22	117	3162	930	156	514	749	223
1977	6658	387	17	101	3376	997	223	545	767	246
1978	7520	437	24	108	3732	1231	237	596	855	300
1979	8224	484	37	112	3976	1426	266	644	964	316
1980	8721	515	29	111	4191	1543	276	673	1060	323
1981	9129	535	28	109	4418	1573	269	716	1144	337
1982	9178	560	31	108	4475	1498	279	728	1157	343
1983	9108	543	30	110	4491	1425	282	746	1153	329
1984	9572	544	31	111	4799	1431	295	774	1236	351
1985	9858	550	30	114	4986	1440	309	803	1260	365
1986	10232	588	31	116	5206	1417	337	826	1343	366
1987	10420	606	41	114	5251	1452	352	843	1394	369
1988	10445	661	38	114	5378	1322	343	814	1418	356
1989	10721	701	43	117	5516	1286	340	832	1517	370
1990	7827	568	35	90	4221	732	211	599	1126	245

Table 2.83 KOSOVO AND METOHIA : STRUCTURAL SHIFT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-28	-104	1	-23	-131	-40	-44	20	282	12
1966	-41	-63	1	-23	-148	-53	-49	12	276	7
1967	-37	-38	-1	-17	-194	-39	-53	17	292	-4
1968	-33	-35	1	-19	-191	-51	-51	13	298	2
1969	-25	-20	0	-24	-209	-67	-55	13	335	2
1970	-34	-43	-1	-26	-226	-62	-57	19	368	-5
1971	-23	5	-0	-32	-250	-105	-64	21	418	-15
1972	-40	-6	-1	-33	-252	-125	-65	15	449	-23
1973	-39	8	-2	-35	-265	-145	-65	31	464	-31
1974	-59	16	0	-41	-272	-187	-70	47	495	-48
1975	-56	-22	-1	-39	-239	-162	-66	30	495	-52
1976	-32	15	1	-38	-238	-158	-70	25	493	-60
1977	-55	27	0	-29	-231	-175	-104	14	518	-74
1978	-81	-2	-2	-34	-246	-205	-119	31	593	-97
1979	-73	-2	-5	-35	-218	-229	-137	28	630	-106
1980	-58	-2	-3	-36	-161	-283	-143	38	645	-112
1981	-29	-3	-3	-33	-76	-335	-138	44	635	-121
1982	-19	43	-3	-28	-104	-372	-137	28	671	-117
1983	-38	38	-2	-27	-31	-462	-137	50	641	-108
1984	-16	70	-4	-25	47	-500	-144	65	600	-123
1985	-36	28	-4	-27	64	-499	-146	85	588	-125
1986	7	66	-3	-28	62	-499	-183	107	634	-148
1987	-0	59	-3	-26	88	-489	-201	172	560	-160
1988	35	70	-2	-21	126	-465	-196	177	497	-151
1989	80	93	-4	-22	144	-437	-190	182	508	-194
1990	160	171	1	-33	-114	-245	-110	183	422	-116

Table 2.84 PRODUCTIVITY IN KOSOVO AND METOHIA:
DIFFERENTIAL SHIFT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-510	-37	8	-20	-101	-91	-9	-72	-145	-42
1966	-613	-41	10	-23	-167	-138	-9	-78	-119	-48
1967	-713	-42	14	-20	-222	-191	-13	-83	-113	-43
1968	-766	-96	7	-23	-224	-170	-12	-82	-123	-41
1969	-811	-66	9	-22	-322	-116	-11	-79	-157	-46
1970	-774	-74	8	-28	-303	-54	-11	-105	-159	-48
1971	-994	-148	6	-33	-388	-26	-11	-122	-222	-50
1972	-1065	-137	2	-36	-356	-77	-13	-146	-257	-45
1973	-1258	-138	0	-42	-491	-51	-18	-164	-315	-38
1974	-1328	-146	-5	-48	-495	-7	-20	-206	-356	-46
1975	-1273	-79	2	-45	-450	-19	-34	-207	-391	-49
1976	-1524	-94	-14	-49	-482	-127	-40	-232	-442	-45
1977	-1521	-188	5	-38	-409	-108	-68	-232	-434	-48
1978	-2087	-96	0	-42	-677	-364	-65	-263	-509	-71
1979	-2517	-219	-7	-45	-887	-397	-62	-323	-533	-43
1980	-2780	-135	16	-45	-1229	-314	-69	-379	-565	-60
1981	-2908	-191	14	-43	-1306	-298	-62	-361	-603	-59
1982	-3107	-163	10	-41	-1421	-341	-80	-357	-647	-66
1983	-3239	-205	8	-49	-1388	-344	-81	-410	-702	-68
1984	-3652	-215	9	-51	-1614	-339	-87	-444	-820	-91
1985	-3345	-212	4	-51	-1288	-328	-94	-430	-837	-109
1986	-3498	-75	4	-54	-1445	-350	-92	-439	-934	-112
1987	-3681	-67	-5	-49	-1394	-557	-93	-490	-928	-100
1988	-3891	-60	-2	-54	-1622	-506	-90	-550	-934	-73
1989	-4573	-144	1	-59	-1964	-523	-93	-624	-1105	-62
1990	-3373	-222	0	-33	-1407	-257	-58	-524	-842	-31

Table 2.85 PRODUCTIVITY IN KOSOVO AND METOHIA:
RATIO OF HYPOTHETICAL AND REAL GDP

In %

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	124.4	173.6	46.4	263.3	122.6	146.7	284.7	132.9	67.1	150.2
1966	126.9	143.3	48.4	276.5	128.0	163.0	302.3	139.4	65.5	165.9
1967	130.9	134.6	31.0	243.3	137.3	180.3	340.0	138.7	63.7	177.9
1968	132.1	168.4	3.8	270.7	135.5	174.9	325.9	137.5	65.9	159.4
1969	130.6	136.5	50.2	286.8	143.2	150.2	321.4	133.1	68.2	159.9
1970	126.9	156.6	57.0	300.1	138.0	128.1	313.7	139.9	66.6	174.0
1971	131.3	172.6	67.0	342.0	142.5	127.1	311.0	141.5	71.0	185.7
1972	131.2	186.1	90.6	344.9	135.3	139.8	299.4	151.3	73.3	180.9
1973	136.0	181.2	111.6	373.2	143.5	137.0	313.1	148.4	79.7	174.1
1974	133.1	166.8	131.9	395.0	137.0	129.7	314.8	154.8	82.4	189.5
1975	128.7	139.3	94.1	380.2	129.5	124.5	327.1	159.0	87.1	193.2
1976	133.4	130.0	270.0	390.3	129.5	144.3	339.1	167.5	93.6	188.3
1977	131.0	171.2	76.8	304.9	123.4	139.7	443.6	166.7	90.2	198.4
1978	140.5	128.7	109.0	338.3	132.9	186.0	443.8	163.7	91.1	227.6
1979	146.0	184.0	146.2	350.0	138.5	178.3	399.4	184.6	90.8	188.7
1980	148.2	136.1	68.9	369.4	149.6	163.1	436.2	202.7	93.0	214.6
1981	147.4	156.9	70.6	329.2	145.5	167.2	395.2	179.4	97.3	214.7
1982	151.7	127.3	81.4	284.0	151.7	190.8	450.3	182.8	97.9	214.2
1983	156.2	144.4	82.7	322.3	146.2	230.3	447.0	192.9	105.6	215.0
1984	162.1	136.7	85.7	317.6	148.5	241.7	461.0	196.1	121.7	256.3
1985	152.2	150.3	98.0	316.9	132.5	235.0	447.8	175.0	124.7	278.5
1986	151.8	101.5	98.4	342.2	136.2	249.5	544.3	167.2	128.8	345.7
1987	154.6	101.3	124.2	285.9	133.1	357.6	606.9	160.5	135.8	338.2
1988	158.5	98.5	112.2	293.4	138.5	375.7	602.3	184.9	144.5	269.7
1989	172.1	107.8	107.5	324.7	149.2	394.5	596.9	213.9	165.0	324.3
1990	169.6	109.8	95.9	373.1	156.3	318.4	490.8	232.0	159.5	249.9

Table 2.86 PRODUCTIVITY IN KOSOVO AND METOHIA:
RATIO OF STRUCTURAL SHIFT AND REAL GDP

In %

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-1.3	-54.4	3.9	-87.4	-12.7	-14.3	-152.5	12.6	67.9	20.4
1966	-1.7	-26.4	3.4	-88.9	-13.1	-17.4	-169.8	7.3	60.7	10.6
1967	-1.5	-16.3	-3.3	-67.0	-17.4	-13.7	-193.5	9.7	59.2	-6.6
1968	-1.3	-18.2	3.5	-77.4	-16.4	-17.2	-181.6	7.3	58.0	2.9
1969	-0.9	-8.5	0.9	-97.7	-17.0	-18.4	-183.9	6.8	60.0	2.2
1970	-1.1	-20.8	-5.7	-97.4	-16.2	-15.0	-179.6	8.7	58.7	-7.0
1971	-0.7	2.3	-1.8	-120.0	-16.7	-21.8	-179.5	8.5	61.8	-20.1
1972	-1.1	-3.5	-8.5	-116.8	-14.6	-24.5	-166.5	5.9	62.3	-27.3
1973	-1.1	5.1	-12.1	-124.0	-15.2	-27.3	-166.4	11.4	63.4	-33.5
1974	-1.4	8.3	1.3	-135.4	-13.1	-28.7	-167.5	16.4	62.6	-45.5
1975	-1.2	-8.6	-3.5	-129.4	-10.2	-22.0	-149.9	9.9	61.8	-48.0
1976	-0.7	5.6	8.8	-127.8	-9.8	-24.6	-152.0	8.0	61.6	-50.5
1977	-1.1	11.8	2.3	-88.2	-8.4	-24.6	-208.0	4.3	60.8	-59.8
1978	-1.5	-0.5	-10.0	-106.9	-8.8	-31.0	-222.5	8.6	63.1	-73.8
1979	-1.3	-0.6	-18.7	-109.3	-7.6	-28.6	-206.2	8.1	59.4	-63.1
1980	-1.0	-0.4	-7.3	-120.6	-5.8	-29.9	-226.5	11.3	56.6	-74.5
1981	-0.5	-0.9	-6.8	-98.6	-2.5	-35.6	-203.4	11.0	54.0	-77.0
1982	-0.3	9.8	-7.2	-74.8	-3.5	-47.4	-221.2	7.0	56.8	-72.9
1983	-0.6	10.2	-6.2	-78.0	-1.0	-74.7	-218.1	13.0	58.7	-70.7
1984	-0.3	17.5	-11.2	-72.0	1.5	-84.5	-225.3	16.3	59.1	-89.9
1985	-0.5	7.6	-11.3	-74.1	1.7	-81.5	-211.9	18.6	58.1	-95.2
1986	0.1	11.4	-10.6	-82.0	1.6	-87.9	-295.2	21.6	60.8	-139.6
1987	-0.0	9.9	-9.8	-64.2	2.2	-120.4	-347.4	32.8	54.6	-146.5
1988	0.5	10.4	-5.6	-54.3	3.3	-132.0	-344.4	40.2	50.7	-114.1
1989	1.3	14.3	-8.8	-61.9	3.9	-134.0	-333.3	46.7	55.2	169.9
1990	3.5	33.0	3.6	-136.2	-4.2	-106.6	-256.4	71.0	59.8	-118.5

Table 2.87 PRODUCTIVITY IN KOSOVO AND METOHIA:
RATIO OF DIFFERENTIAL SHIFT AND REAL GDP

In %

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-23.1	-19.2	49.7	-75.9	-9.8	-32.4	-32.2	-45.5	-35.0	-70.6
1966	-25.2	-16.9	48.2	-87.6	-14.8	-45.5	-32.6	-46.7	-26.2	-76.4
1967	-29.4	-18.2	72.3	-76.3	-19.9	-66.6	-46.5	-48.4	-22.9	-71.3
1968	-30.8	-50.2	42.7	-93.3	-19.2	-57.7	-44.3	-44.8	-23.9	-62.3
1969	-29.7	-28.0	48.9	-89.1	-26.2	-31.8	-37.5	-39.9	-28.2	-62.2
1970	-25.8	-35.8	48.7	-102.6	-21.8	-13.1	-34.1	-48.6	-25.3	-67.0
1971	-30.6	-75.0	34.8	-122.0	-25.9	-5.4	-31.4	-50.0	-32.8	-65.6
1972	-30.1	-82.6	17.9	-128.2	-20.7	-15.2	-32.9	-57.2	-35.6	-53.7
1973	-34.9	-86.3	0.6	-149.2	-28.2	-9.7	-46.6	-59.9	-43.1	-40.6
1974	-31.7	-75.1	-33.2	-159.7	-23.9	-1.1	-47.3	-71.2	-45.0	-44.0
1975	-27.4	-30.8	9.4	-150.9	-19.3	-2.6	-77.2	-68.9	-48.9	-45.2
1976	-32.7	-35.6	-178.8	-162.5	-19.7	-19.7	-87.1	-75.5	-55.2	-37.8
1977	-29.9	-83.0	20.9	-116.6	-15.0	-15.1	-135.7	-71.1	-51.0	-38.5
1978	-39.0	-28.2	0.9	-131.4	-24.1	-55.1	-121.3	-72.2	-54.2	-53.9
1979	-44.7	-83.4	-27.5	-140.8	-30.9	-49.7	-93.2	-92.6	-50.2	-25.6
1980	-47.3	-35.7	38.4	-148.8	-43.9	-33.2	-109.8	-114.0	-49.6	-40.1
1981	-47.0	-56.0	36.2	-130.6	-43.0	-31.6	-91.8	-90.4	-51.3	-37.7
1982	-51.3	-37.1	25.8	-109.2	-48.2	-43.4	-129.1	-89.8	-54.8	-41.3
1983	-55.5	-54.6	23.5	-144.3	-45.2	-55.6	-128.9	-105.9	-64.3	-44.3
1984	-61.9	-54.1	25.4	-145.6	-49.9	-57.2	-135.7	-112.4	-80.8	-66.3
1985	-51.6	-57.9	13.2	-142.8	-34.2	-53.5	-135.9	-93.6	-82.8	-83.3
1986	-51.9	-12.9	12.3	-160.2	-37.8	-61.6	-149.2	-88.8	-89.5	-106.1
1987	-54.6	-11.2	-14.4	-121.7	-35.3	-137.2	-159.5	-93.2	-90.4	-91.6
1988	-59.1	-8.9	-6.6	-139.1	-41.8	-143.7	-157.8	-125.1	-95.2	-55.6
1989	-73.4	-22.1	1.3	-162.8	-53.1	-160.4	-163.5	-160.5	-120.3	-54.4
1990	-73.1	-42.9	0.5	-136.9	-52.1	-111.8	-134.4	-203.0	-119.3	-31.5

Table 2.88 PRODUCTIVITY IN KOSOVO AND METOHIA:
NET DIFFERENTIAL SHIFT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-512	-22	10	-22	-109	-78	-13	-87	-148	-43
1966	-623	-25	13	-26	-174	-111	-14	-99	-135	-50
1967	-694	-28	37	-24	-225	-152	-18	-108	-129	-47
1968	-757	-59	10	-26	-226	-147	-18	-107	-137	-47
1969	-821	-42	14	-25	-317	-104	-17	-105	-173	-51
1970	-785	-47	13	-28	-292	-54	-16	-130	-174	-56
1971	-988	-95	9	-32	-378	-25	-17	-147	-245	-59
1972	-1080	-102	4	-34	-348	-67	-19	-171	-286	-56
1973	-1285	-114	0	-38	-479	-44	-26	-191	-345	-48
1974	-1384	-122	-6	-42	-483	-6	-30	-243	-397	-55
1975	-1351	-64	2	-43	-441	-16	-49	-244	-435	-60
1976	-1576	-80	-15	-44	-470	-113	-55	-265	-480	-54
1977	-1561	-146	7	-41	-400	-97	-72	-268	-485	-58
1978	-2142	-74	0	-45	-673	-308	-76	-308	-577	-81
1979	-2535	-164	-6	-48	-904	-323	-72	-374	-594	-51
1980	-2853	-99	19	-49	-1255	-251	-83	-445	-615	-74
1981	-2950	-144	18	-50	-1335	-237	-80	-414	-634	-74
1982	-3150	-121	12	-50	-1455	-276	-100	-405	-673	-82
1983	-3265	-159	10	-57	-1416	-279	-101	-447	-730	-88
1984	-3683	-179	11	-61	-1630	-278	-107	-489	-832	-119
1985	-3380	-179	5	-61	-1302	-268	-113	-471	-852	-140
1986	-3538	-61	5	-65	-1468	-291	-106	-483	-919	-149
1987	-3670	-54	-5	-59	-1446	-451	-101	-528	-893	-134
1988	-3914	-45	-2	-64	-1652	-428	-102	-622	-894	-104
1989	-4569	-105	0	-68	-2015	-450	-107	-711	-1026	-87
1990	-3351	-149	0	-36	-1400	-276	-68	-610	-766	-46

Table 2.89 PRODUCTIVITY IN KOSOVO AND METOHIA:
ALLOCATION EFFECT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	2	-15	-2	3	8	-13	4	15	3	1
1966	9	-15	-3	4	7	-27	5	21	16	2
1967	-19	-14	-23	4	3	-39	5	25	16	4
1968	-9	-37	-4	3	2	-23	6	25	14	5
1969	10	-24	-5	3	-5	-11	6	26	16	5
1970	10	-28	-5	0	-11	-0	6	25	16	8
1971	-6	-53	-4	-1	-10	-1	6	26	23	10
1972	15	-36	-2	-2	-8	-10	7	25	29	11
1973	27	-24	-0	-4	-12	-7	8	27	29	10
1974	56	-24	0	-6	-11	-1	10	37	41	9
1975	77	-16	-0	-2	-9	-3	15	37	44	11
1976	52	-14	1	-4	-12	-15	15	33	38	10
1977	40	-41	-3	3	-9	-11	4	36	51	10
1978	55	-22	-0	3	-4	-56	11	45	68	10
1979	19	-55	-1	3	16	-74	10	51	61	8
1980	73	-36	-3	5	26	-63	14	66	49	14
1981	42	-47	-4	7	29	-61	18	54	30	15
1982	43	-42	-2	8	34	-65	20	48	26	16
1983	27	-46	-2	8	28	-65	20	37	27	20
1984	31	-37	-2	10	16	-61	20	45	11	28
1985	35	-33	-1	10	14	-60	19	41	15	31
1986	40	-14	-1	10	23	-59	13	44	-15	37
1987	-11	-13	-0	10	52	-106	9	38	-35	34
1988	23	-15	0	10	30	-78	12	72	-39	31
1989	-4,1	-38,4	0,0	9,1	51,8	-73,1	14,2	86,8	-79,1	24,5
1990	-22,4	-72,5	0,0	3,3	-6,8	18,8	9,9	86,2	-76,2	14,8

Table 2.90 PRODUCTIVITY IN KOSOVO AND METOHIA:
TYPES OF ALLOCATION EFFECT

Year	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	1	3	2	2	1	2	2	2	2
1966	1	3	2	2	1	2	2	2	2
1967	1	3	2	2	1	2	2	2	2
1968	1	3	2	2	1	2	2	2	2
1969	1	3	2	1	1	2	2	2	2
1970	1	3	2	1	1	2	2	2	2
1971	1	3	1	1	1	2	2	2	2
1972	1	3	1	1	1	2	2	2	2
1973	1	3	1	1	1	2	2	2	2
1974	1	2	1	1	1	2	2	2	2
1975	1	3	1	1	1	2	2	2	2
1976	1	2	1	1	1	2	2	2	2
1977	1	3	2	1	1	2	2	2	2
1978.	1	3	2	1	1	2	2	2	2
1979	1	2	2	2	1	2	2	2	2
1980	1	3	2	2	1	2	2	2	2
1981	1	3	2	2	1	2	2	2	2
1982	1	3	2	2	1	2	2	2	2
1983	1	3	2	2	1	2	2	2	2
1984	1	3	2	2	1	2	2	2	2
1985	1	3	2	2	1	2	2	2	2
1986	1	3	2	2	1	2	2	1	2
1987	1	1	2	2	1	2	2	1	2
1988	1	2	2	2	1	2	2	1	2
1989	1	4	2	2	1	2	2	1	2
1990	1	4	2	1	2	2	2	1	2

In addition to water management, trade was the only sector in which in most years real GDP exceeded hypothetical – from 1965 to 1982. The reason was in the positive structural shift being greater than the effects of the negative differential shift.

The only other sector in which this was also the case was agriculture, albeit only in one year – 1988.

None of the other sectors showed productivity above the Yugoslav average, meaning that real GDP in all of them was constantly below hypothetical.

As expected from analyzing the differential shift, water management was the only sector in the Kosovo and Metohia economy which appeared as comparatively good. This sector, however, in all of the surveyed years (except in 1989 and 1990) in which it was comparatively good, was non-specialized in, and was therefore characterized by the Type 3 allocation effect. In the year in which it employed an above-average number of workers (1987), it was not comparatively good, and was of the Type 1 allocation effect. This sector was also a Type 2 sector in 1974, 1976, 1979, and 1988 (See *Table 2.90*).

In forestry, the manufacturing and trade Type 1 and 2 allocation effects appeared in various combinations, with Type 1 being dominant in the manufacturing, and Type 2 in forestry and trade.

Artisanship and catering and tourism were sectors with below-average productivity and employment, being marked as Type 2 sectors throughout the observed period. Agriculture and construction, on the other hand, were characterized by above-average share in the number of employed and below-average productivity, and were Type 1 sectors during the entire time (except for 1990 in the case of construction).

Vojvodina

GDP of the social sector in Vojvodina's economy in the period from 1965 to 1990 is listed in *Table 2.91*, while trends in the province's productivity are presented in *Table 2.92*.

The Vojvodina economy achieved its maximum productivity in 1981. That year, each worker produced on average 76,000 dinars of the province's GDP. As in all of the other analyzed regions of Yugoslavia, minimum productivity was in 1965, when it amounted to 39,000 dinars per worker.

In Vojvodina, as well, two sectors appeared on opposite poles: trade reached maximum productivity, while the situation in the artisanship sector was the reverse. In the sector of trade, workers produced on average 94,000 dinars each, while in artisanship the amount was less than one-third of what employees in trade produced – only 24,000 dinars.

In the first eight years of the surveyed period, Vojvodina's GDP was below, and in the remaining 18 above hypothetical (*Table 2.96*). The latter was the result of improvement in the structural and differential components of productivity.

The structural shift was negative only in the first two years, whereas in the others it ranged from 0.1% in 1967, to 2.7% in 1974, to 5.5% of GDP in 1990 (*Table 2.97*). The differential shift was negative, i.e. sectoral productivity was below aver-

age, in the first 12 years (1965-1976), only to grow continuously and be positive later on (Table 2.98).

Agriculture in Vojvodina in every year of the surveyed period had higher productivity than the Yugoslav average. In 1965, 1966, and 1970, it was still not enough to make up for the negative influence of the sector's structural shift, resulting in real GDP being smaller than hypothetical. In all other years, on the other hand, Vojvodina's real GDP was higher than hypothetical.

Table 2.91 VOJVODINA: GDP OF THE SOCIAL SECTOR

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	13674	2830	122	84	5567	965	225	1036	2519	326
1966	14705	3453	148	86	5601	1104	226	1070	2663	354
1967	15154	3561	153	85	5603	1254	220	1145	2801	332
1968	15404	3411	147	83	5627	1392	225	1211	2969	339
1969	16783	3641	156	83	6258	1469	236	1295	3297	348
1970	17247	3049	131	87	6767	1599	248	1383	3644	340
1971	19781	3953	171	88	7651	1735	270	1477	4084	352
1972	20264	3744	161	90	8146	1719	288	1503	4269	343
1973	21551	4188	180	92	8755	1640	302	1622	4427	346
1974	23610	4502	193	97	9850	1735	324	1784	4741	384
1975	24158	4150	178	99	10412	1953	376	1784	4801	405
1976	25270	4594	197	98	10708	2190	394	1820	4833	436
1977	27515	5044	230	106	11669	2405	423	1936	5235	466
1978	29142	4620	230	105	12499	2848	457	2130	5758	496
1979	31293	4611	242	103	13830	3019	504	2123	6303	558
1980	31888	4645	212	98	14650	2994	489	2023	6232	545
1981	33551	4734	218	106	15428	3015	494	2136	6879	541
1982	34035	5079	232	95	15514	2867	504	2072	7086	586
1983	33714	5024	236	101	15817	2492	495	2084	6830	635
1984	34515	5664	227	107	16302	2372	505	2199	6489	650
1985	33888	5338	231	112	16402	2206	538	2288	6193	580
1986	34367	5447	238	111	16785	2092	443	2419	6329	503
1987	34293	5316	241	117	17429	2005	422	2426	5885	452
1988	33785	5396	238	132	17549	1889	424	2104	5637	416
1989	33754	5359	229	138	17891	1538	375	2218	5625	381
1990	31100	5301	211	126	16163	1285	342	1896	5434	342

Table 2.92 VOJVODINA: LABOR PRODUCTIVITY

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	0,039	0,034	0,097	0,018	0,039	0,030	0,017	0,040	0,067	0,038
1966	0,045	0,047	0,056	0,030	0,041	0,038	0,020	0,043	0,073	0,042
1967	0,048	0,053	0,037	0,033	0,042	0,045	0,020	0,045	0,078	0,040
1968	0,050	0,057	0,064	0,037	0,043	0,044	0,022	0,047	0,083	0,042
1969	0,053	0,061	0,062	0,037	0,047	0,043	0,023	0,049	0,088	0,044
1970	0,054	0,053	0,051	0,041	0,050	0,045	0,024	0,051	0,094	0,041
1971	0,060	0,069	0,060	0,043	0,054	0,047	0,026	0,051	0,098	0,042
1972	0,059	0,066	0,054	0,044	0,054	0,045	0,029	0,052	0,097	0,039
1973	0,062	0,073	0,055	0,043	0,057	0,046	0,031	0,056	0,098	0,040
1974	0,066	0,074	0,097	0,044	0,061	0,045	0,034	0,060	0,102	0,043
1975	0,064	0,067	0,084	0,044	0,061	0,048	0,038	0,059	0,098	0,044
1976	0,065	0,074	0,092	0,044	0,062	0,050	0,036	0,057	0,095	0,044
1977	0,069	0,086	0,107	0,043	0,064	0,055	0,033	0,056	0,102	0,037
1978	0,071	0,078	0,113	0,059	0,066	0,062	0,034	0,061	0,112	0,039
1979	0,074	0,079	0,117	0,061	0,070	0,063	0,035	0,059	0,119	0,043
1980	0,074	0,080	0,100	0,056	0,072	0,062	0,033	0,054	0,114	0,042
1981	0,076	0,080	0,101	0,058	0,073	0,063	0,033	0,055	0,125	0,041
1982	0,075	0,083	0,097	0,050	0,072	0,060	0,033	0,053	0,127	0,043
1983	0,073	0,081	0,094	0,048	0,072	0,053	0,029	0,054	0,118	0,046
1984	0,074	0,089	0,081	0,051	0,073	0,051	0,029	0,056	0,110	0,047
1985	0,071	0,082	0,089	0,051	0,071	0,050	0,031	0,056	0,105	0,041
1986	0,071	0,083	0,092	0,050	0,071	0,048	0,025	0,059	0,106	0,035
1987	0,070	0,080	0,093	0,053	0,072	0,047	0,023	0,059	0,097	0,032
1988	0,069	0,081	0,092	0,060	0,072	0,046	0,023	0,051	0,093	0,030
1989	0,069	0,082	0,089	0,063	0,073	0,038	0,021	0,055	0,091	0,030
1990	0,066	0,083	0,086	0,059	0,067	0,032	0,023	0,049	0,093	0,030

Table 2.93 VOJVODINA: HYPOTHETICAL GDP

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	14983	3548	54	202	6128	1383	573	1104	1622	368
1966	15619	3500	127	139	6521	1401	558	1207	1758	408
1967	15836	3368	209	128	6691	1392	562	1268	1801	418
1968	16024	3143	121	118	6807	1678	526	1342	1866	425
1969	17399	3310	140	123	7375	1884	573	1464	2088	443
1970	18357	3320	148	123	7841	2050	598	1575	2228	475
1971	19982	3462	170	124	8605	2224	625	1756	2507	508
1972	20742	3468	180	126	9111	2294	597	1765	2670	531
1973	21408	3546	204	131	9570	2218	595	1804	2799	540
1974	23141	3905	129	143	10382	2468	616	1910	3014	575
1975	24021	3942	135	142	10932	2595	625	1940	3121	590
1976	24789	3966	137	142	11123	2779	706	2051	3246	640
1977	26721	3928	143	164	12165	2909	865	2295	3417	834
1978	28758	4157	143	124	13238	3214	952	2434	3602	895
1979	30622	4214	149	122	14293	3454	1023	2597	3826	944
1980	31007	4156	151	125	14556	3442	1075	2662	3902	938
1981	31262	4166	152	130	14887	3365	1044	2714	3879	925
1982	31108	4227	165	131	14777	3292	1045	2701	3842	928
1983	30665	4144	167	140	14588	3157	1121	2583	3851	914
1984	31404	4287	188	141	14954	3120	1174	2657	3952	933
1985	31616	4327	173	146	15317	2953	1168	2701	3902	929
1986	32149	4376	173	146	15719	2889	1195	2736	3971	943
1987	31778	4292	168	142	15747	2741	1202	2670	3911	905
1988	31138	4247	165	140	15429	2613	1182	2613	3872	877
1989	31231	4201	164	139	15663	2567	1133	2576	3965	822
1990	27729	3749	143	124	14142	2325	875	2268	3434	667

Table 2.94 PRODUCTIVITY IN VOJVODINA: STRUCTURAL SHIFT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-455	-1111	4	-67	-637	-135	-307	105	1642	50
1966	-94	-645	9	-45	-670	-150	-313	63	1630	26
1967	10	-408	-22	-35	-847	-106	-320	88	1675	-16
1968	73	-340	8	-34	-822	-165	-293	71	1641	8
1969	236	-207	2	-42	-875	-230	-328	75	1836	6
1970	39	-441	-15	-40	-922	-241	-342	98	1960	-19
1971	484	47	-4	-44	-1006	-380	-361	106	2181	-55
1972	412	-66	-17	-42	-984	-403	-332	69	2267	-80
1973	521	101	-22	-44	-1017	-442	-316	139	2227	-104
1974	635	195	1	-49	-995	-545	-327	202	2291	-138
1975	288	-243	-5	-48	-862	-458	-286	121	2216	-146
1976	565	171	4	-46	-838	-473	-317	98	2138	-172
1977	592	271	4	-47	-832	-512	-406	60	2305	-251
1978	379	-17	-13	-39	-872	-535	-477	127	2496	-290
1979	360	-14	-19	-38	-785	-554	-528	113	2501	-316
1980	377	-14	-16	-41	-560	-631	-558	149	2373	-326
1981	401	-25	-15	-39	-257	-716	-538	167	2155	-332
1982	619	326	-15	-34	-344	-817	-513	103	2229	-316
1983	589	293	-13	-34	-101	-1024	-547	174	2140	-301
1984	787	548	-24	-32	147	-1090	-574	221	1919	-327
1985	574	219	-20	-34	197	-1024	-553	287	1820	-318
1986	805	492	-19	-35	186	-1018	-648	354	1874	-381
1987	749	418	-13	-32	262	-923	-688	545	1573	-392
1988	735	448	-8	-26	363	-918	-676	567	1357	-371
1989	881	558	-13	-27	409	-872	-633	562	1327	-430
1990	1713	1947	15	-49	-414	-835	-467	567	1284	-336

Table 2.95 PRODUCTIVITY IN VOJVODINA: DIFFERENTIAL SHIFT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-854	393	64	-51	76	-284	-41	-173	-745	-93
1966	-820	597	12	-8	-251	-148	-18	-199	-725	-80
1967	-692	602	-34	-7	-241	-32	-22	-211	-675	-71
1968	-694	608	18	-1	-358	-120	-7	-202	-537	-93
1969	-853	539	14	2	-242	-184	-10	-244	-626	-101
1970	-1149	170	-2	4	-152	-211	-8	-290	-544	-116
1971	-686	444	5	7	51	-109	6	-385	-604	-101
1972	-890	342	-3	7	19	-172	23	-331	-668	-108
1973	-377	541	-2	4	202	-136	23	-321	-599	-90
1974	-167	402	63	3	463	-188	35	-329	-564	-52
1975	-152	450	48	5	342	-184	37	-276	-537	-39
1976	-85	457	55	3	424	-116	5	-329	-551	-33
1977	202	844	83	-11	336	7	-36	-419	-487	-116
1978	4	480	100	20	134	169	-18	-432	-340	-110
1979	311	412	112	19	322	118	10	-587	-24	-70
1980	504	503	77	14	654	183	-28	-788	-43	-68
1981	1888	592	81	15	798	366	-13	-745	845	-52
1982	2309	526	82	-1	1080	392	-27	-732	1015	-26
1983	2460	586	82	-5	1329	359	-79	-673	839	21
1984	2324	829	64	-2	1201	343	-95	-679	619	45
1985	1698	792	78	0	889	277	-77	-700	471	-32
1986	1413	579	84	-0	880	221	-104	-671	484	-59
1987	1766	606	86	7	1420	187	-92	-789	402	-61
1988	1912	702	81	18	1757	194	-82	-1076	408	-90
1989	1642	601	78	25	1818	-157	-125	-920	332	-10
1990	1659	-395	52	51	2435	-205	-66	-939	716	11

Table 2.96 PRODUCTIVITY IN VOJVODINA:
RATIO OF HYPOTHETICAL AND REAL GDP

In %

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	109.6	125.4	44.1	240.9	110.1	143.3	254.3	106.6	64.4	113.2
1966	106.2	101.4	85.8	161.8	116.4	127.0	246.4	112.7	66.0	115.2
1967	104.5	94.6	136.5	150.1	119.4	111.0	255.1	110.7	64.3	126.0
1968	104.0	92.1	82.1	142.2	121.0	120.5	233.3	110.8	62.8	125.3
1969	103.7	90.9	89.7	148.3	117.9	128.2	243.5	113.1	63.3	127.1
1970	106.4	108.9	113.0	141.9	115.9	128.2	241.1	113.9	61.1	139.6
1971	101.0	87.6	99.6	141.1	112.5	128.2	231.7	118.9	61.4	144.4
1972	102.4	92.6	112.1	139.5	111.8	133.4	207.0	117.4	62.5	154.8
1973	99.3	84.7	113.4	142.7	109.3	135.3	197.2	111.2	63.2	156.0
1974	98.0	86.7	66.8	147.1	105.4	142.3	190.3	107.1	63.6	149.5
1975	99.4	95.0	75.8	143.8	105.0	132.8	166.2	108.7	65.0	145.7
1976	98.1	86.3	69.7	144.7	103.9	126.9	179.0	112.7	67.2	146.9
1977	97.1	77.9	62.3	154.7	104.2	121.0	204.4	118.5	65.3	178.9
1978	98.7	90.0	62.0	118.2	105.9	112.9	208.5	114.3	62.5	180.6
1979	97.9	91.4	61.7	118.6	103.3	114.4	202.8	122.3	60.7	169.2
1980	97.2	89.5	71.4	127.1	99.4	115.0	219.8	131.6	62.6	172.3
1981	93.2	88.0	69.7	122.4	96.5	111.6	211.4	127.1	56.4	170.9
1982	91.4	83.2	71.1	137.5	95.3	114.8	207.3	130.4	54.2	158.3
1983	91.0	82.5	70.7	138.8	92.2	126.7	226.5	123.9	56.4	144.0
1984	91.0	75.7	82.8	131.7	91.7	131.5	232.5	120.8	60.9	143.5
1985	93.3	81.1	74.7	130.4	93.4	133.9	217.1	118.1	63.0	160.2
1986	93.5	80.3	72.5	131.6	93.7	138.1	269.8	113.1	62.7	187.5
1987	92.7	80.7	69.7	121.5	90.3	136.7	284.9	110.0	66.5	200.2
1988	92.2	78.7	69.4	106.0	87.9	138.3	278.9	124.2	68.7	210.9
1989	92.5	78.4	71.6	101.1	87.5	166.9	302.2	116.2	70.5	215.6
1990	89.2	70.7	67.8	98.8	87.5	180.9	255.9	119.6	63.2	195.1

Table 2.97 PRODUCTIVITY IN VOJVODINA:
RATIO OF STRUCTURAL SHIFT AND REAL GDP

In %

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-3.3	-39.3	3.7	-79.9	-11.4	-14.0	-136.2	10.1	65.2	15.4
1966	-0.6	-18.7	6.1	-52.0	-12.0	-13.6	-138.4	5.9	61.2	7.3
1967	0.1	-11.5	-14.4	-41.3	-15.1	-8.4	-145.1	7.7	59.8	-4.7
1968	0.5	-10.0	5.4	-40.6	-14.6	-11.9	-130.0	5.9	55.3	2.2
1969	1.4	-5.7	1.6	-50.5	-14.0	-15.7	-139.3	5.8	55.7	1.8
1970	0.2	-14.5	-11.4	-46.1	-13.6	-15.1	-138.0	7.1	53.8	-5.6
1971	2.4	1.2	-2.6	-49.5	-13.1	-21.9	-133.8	7.2	53.4	-15.6
1972	2.0	-1.8	-10.5	-47.2	-12.1	-23.4	-115.1	4.6	53.1	-23.3
1973	2.4	2.4	-12.3	-47.4	-11.6	-27.0	-104.8	8.6	50.3	-30.0
1974	2.7	4.3	0.6	-50.4	-10.1	-31.4	-101.2	11.3	48.3	-35.9
1975	1.2	-5.9	-2.8	-48.9	-8.3	-23.4	-76.1	6.8	46.2	-36.2
1976	2.2	3.7	2.3	-47.4	-7.8	-21.6	-80.2	5.4	44.2	-39.4
1977	2.2	5.4	1.8	-44.8	-7.1	-21.3	-95.8	3.1	44.0	-53.9
1978	1.3	-0.4	-5.7	-37.3	-7.0	-18.8	-104.6	6.0	43.3	-58.5
1979	1.2	-0.3	-7.9	-37.0	-5.7	-18.3	-104.7	5.3	39.7	-56.6
1980	1.2	-0.3	-7.5	-41.5	-3.8	-21.1	-114.1	7.4	38.1	-59.8
1981	1.2	-0.5	-6.7	-36.7	-1.7	-23.7	-108.8	7.8	31.3	-61.3
1982	1.8	6.4	-6.3	-36.2	-2.2	-28.5	-101.8	5.0	31.5	-53.9
1983	1.7	5.8	-5.3	-33.6	-0.6	-41.1	-110.5	8.4	31.3	-47.3
1984	2.3	9.7	-10.8	-29.8	0.9	-46.0	-113.6	10.1	29.6	-50.4
1985	1.7	4.1	-8.6	-30.5	1.2	-46.4	-102.7	12.5	29.4	-54.8
1986	2.3	9.0	-7.8	-31.6	1.1	-48.6	-146.3	14.6	29.6	-75.7
1987	2.2	7.9	-5.5	-27.3	1.5	-46.0	-163.1	22.5	26.7	-86.8
1988	2.2	8.3	-3.4	-19.6	2.1	-48.6	-159.5	27.0	24.1	-89.2
1989	2.6	10.4	-5.9	-19.3	2.3	-56.7	-168.8	25.3	23.6	-113.0
1990	5.5	36.7	7.3	-39.0	2.6	-65.0	-136.5	29.9	23.6	-98.3

Table 2.98 PRODUCTIVITY IN VOJVODINA:
RATIO OF DIFFERENTIAL SHIFT AND REAL GDP

In %

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-6.2	13.9	52.2	-61.0	1.4	-29.4	-18.1	-16.7	-29.6	-28.6
1966	-5.6	17.3	8.1	-9.7	-4.5	-13.4	-8.0	-18.6	-27.2	-22.5
1967	-4.6	16.9	-22.1	-8.8	-4.3	-2.6	-9.9	-18.4	-24.1	-21.3
1968	-4.5	17.8	12.5	-1.5	-6.4	-8.7	-3.3	-16.7	-18.1	-27.5
1969	-5.1	14.8	8.7	2.2	-3.9	-12.5	-4.2	-18.8	-19.0	-28.9
1970	-6.7	5.6	-1.6	4.2	-2.2	-13.2	-3.0	-21.0	-14.9	-34.0
1971	-3.5	11.2	3.0	8.4	0.7	-6.3	2.1	-26.0	-14.8	-28.8
1972	-4.4	9.1	-1.6	7.7	0.2	-10.0	8.1	-22.0	-15.7	-31.4
1973	-1.8	12.9	-1.1	4.7	2.3	-8.3	7.6	-19.8	-13.5	-26.0
1974	-0.7	8.9	32.6	3.3	4.7	-10.8	11.0	-18.4	-11.9	-13.6
1975	-0.6	10.9	27.0	5.1	3.3	-9.4	9.9	-15.5	-11.2	-9.6
1976	-0.3	9.9	28.0	2.7	4.0	-5.3	1.2	-18.1	-11.4	-7.5
1977	0.7	16.7	35.9	-9.9	2.9	0.3	-8.6	-21.6	-9.3	-24.9
1978	0.0	10.4	43.7	19.2	1.1	5.9	-4.0	-20.3	-5.9	-22.1
1979	1.0	8.9	46.2	18.4	2.3	3.9	1.9	-27.7	-0.4	-12.6
1980	1.6	10.8	36.1	14.4	4.5	6.1	-5.7	-39.0	-0.7	-12.4
1981	5.6	12.5	37.0	14.3	5.2	12.1	-2.6	-34.9	12.3	-9.6
1982	6.8	10.4	35.2	-1.3	7.0	13.7	-5.4	-35.3	14.3	-4.4
1983	7.3	11.7	34.6	-5.2	8.4	14.4	-16.0	-32.3	12.3	3.4
1984	6.7	14.6	28.0	-1.8	7.4	14.4	-18.9	-30.9	9.5	6.9
1985	5.0	14.8	33.9	0.1	5.4	12.5	-14.4	-30.6	7.6	-5.4
1986	4.1	10.6	35.3	-0.1	5.2	10.6	-23.5	-27.8	7.6	-11.8
1987	5.1	11.4	35.8	5.7	8.1	9.3	-21.8	-32.5	6.8	-13.5
1988	5.7	13.0	34.0	13.7	10.0	10.3	-19.4	-51.2	7.2	-21.7
1989	4.9	11.2	34.2	18.2	10.2	-10.2	-33.4	-41.5	5.9	-2.7
1990	5.3	-7.5	24.8	40.2	15.1	-16.0	-19.4	-49.5	13.2	3.2

According to the achieved relative sectoral productivity, water management was right next to agriculture. Labor productivity in this sector was below the average Yugoslav only in four years – 1967, 1970, 1972 and 1973. During these years real GDP was below hypothetical, while exceeding it in all of the other years.

Trade in Vojvodina, on its part, was best when it came to the ratio of real and hypothetical GDP: every year the former exceeded the latter. Up until 1980 this was owed to a positive structural shift. As of 1981, the positive structural shift was combined with a positive differential shift.

Although Vojvodina's manufacturing was below the Yugoslav average in productivity in only five years, the negative structural shift annulled the effects of the positive differential shift from 1965 to 1979. In four years (1980-1983) a positive difference between the productivity of workers in the province's manufacturing and productivity at the level of Yugoslavia was sufficient to compensate for the negative effects of the structural component. As of 1984, on the other hand, there was a convergent effect of the positive structural and positive differential shift, so that in the last two years Vojvodina had gains of 22.5% of the value of GDP as a result.

The GDPs of forestry (except in 1990), construction, artisanship, transport and communication, and catering and tourism, were below hypothetical throughout the surveyed period. In the case of transport and communication, this was exclusively the consequence of lower labor productivity, i.e. a negative differential shift, which prevailed over the positive effects of the sector's structural component every year.

A similar conclusion may be reached for catering and tourism as well, which in only two years (1983 and 1984) registered a positive differential shift.

Although in forestry years with a positive differential shift predominated (there were 15 of them), the negative effect of the structural shift was sufficient to annul the positive effects of the differential shift each year.

Table 2.99 PRODUCTIVITY IN VOJVODINA: NET DIFFERENTIAL SHIFT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-1332	119	62	-107	92	-397	-45	-217	-713	-126
1966	-1420	187	6	-25	-292	-213	-22	-247	-706	-108
1967	-1226	185	-13	-23	-278	-48	-26	-257	-670	-98
1968	-1282	188	10	-4	-409	-156	-9	-241	-532	-128
1969	-1394	161	7	6	-277	-235	-12	-285	-613	-146
1970	-1426	50	-1	12	-173	-262	-9	-332	-540	-170
1971	-1092	131	3	25	58	-134	7	-427	-598	-157
1972	-1239	101	-1	23	22	-207	31	-378	-659	-170
1973	-853	159	-1	14	224	-167	30	-368	-595	-149
1974	-527	115	45	10	514	-225	47	-377	-564	-90
1975	-546	132	32	16	374	-223	50	-323	-537	-67
1976	-464	135	37	8	469	-137	6	-375	-550	-55
1977	-489	260	61	-28	366	9	-40	-460	-490	-167

1978	-348	149	83	72	143	209	-20	-474	-350	-159
1979	35	132	93	69	339	148	11	-628	-25	-104
1980	181	163	62	49	684	233	-30	-833	-45	-102
1981	1637	196	66	51	830	467	-15	-773	896	-81
1982	2106	175	61	-4	1135	490	-31	-757	1077	-40
1983	2208	200	60	-16	1405	443	-83	-714	879	33
1984	1927	286	43	-6	1277	423	-97	-716	643	72
1985	1256	273	57	0	938	353	-79	-731	496	-51
1986	1078	200	61	-0	930	283	-106	-701	506	-96
1987	1448	212	64	20	1498	244	-90	-819	420	-101
1988	1526	245	58	52	1861	248	-81	-1130	427	-155
1989	1272	214	57	71	1915	-197	-126	-986	344	-19
1990	2041	-143	37	142	2563	-246	-66	-1023	756	21

Table 2.100 PRODUCTIVITY IN VOJVODINA: ALLOCATION EFFECT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	478	275	2	56	-16	113	4	44	-32	33
1966	600	410	6	17	41	65	3	48	-19	28
1967	534	417	-21	15	37	15	4	46	-6	27
1968	588	420	9	3	51	35	2	39	-6	35
1969	542	378	7	-4	35	51	2	41	-13	45
1970	277	119	-1	-8	21	51	2	42	-4	54
1971	407	313	3	-17	-7	25	-1	42	-7	56
1972	349	241	-1	-16	-2	35	-7	47	-9	62
1973	476	382	-1	-9	-22	31	-7	48	-4	59
1974	360	287	18	-7	-51	38	-12	49	0	38
1975	394	318	16	-11	-32	39	-13	47	-0	29
1976	379	322	18	-5	-45	21	-1	46	-1	22
1977	691	584	22	17	-30	-2	3	41	3	51
1978	352	332	18	-51	-10	-40	2	42	10	50
1979	276	280	19	-50	-18	-30	-1	41	1	33
1980	324	340	15	-35	-30	-50	3	44	2	34
1981	251	396	15	-36	-31	-100	2	28	-51	29

1982	203	351	21	3	-55	-98	4	25	-63	14
1983	252	386	22	11	-76	-84	4	41	-40	-12
1984	397	543	21	4	-76	-81	2	37	-25	-27
1985	442	520	21	-0	-49	-76	2	32	-25	20
1986	335	379	23	0	-50	-63	1	30	-22	37
1987	318	394	22	-13	-78	-57	-2	30	-18	40
1988	387	457	23	-34	-103	-54	-2	53	-19	65
1989	370	387	22	-46	-96	40	1	66	-11	8
1990	-382	-253	16	-91	-127	40	0	84	-40	-10

Table 2.101 PRODUCTIVITY IN VOJVODINA:
TYPES OF ALLOCATION EFFECT

Year	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	4	4	2	3	2	2	2	1	2
1966	4	4	2	2	2	2	2	1	2
1967	4	1	2	2	2	2	2	1	2
1968	4	4	2	2	2	2	2	1	2
1969	4	4	3	2	2	2	2	1	2
1970	4	1	3	2	2	2	2	1	2
1971	4	4	3	3	2	3	2	1	2
1972	4	1	3	3	2	3	2	1	2
1973	4	1	3	3	2	3	2	1	2
1974	4	4	3	3	2	3	2	2	2
1975	4	4	3	3	2	3	2	1	2
1976	4	4	3	3	2	3	2	1	2
1977	4	4	2	3	3	2	2	2	2
1978	4	4	3	3	3	2	2	2	2
1979	4	4	3	3	3	3	2	2	2
1980	4	4	3	3	3	2	2	2	2
1981	4	4	3	3	3	2	2	3	2
1982	4	4	2	3	3	2	2	3	2
1983	4	4	2	3	3	2	2	3	3
1984	4	4	2	3	3	2	2	3	3
1985	4	4	3	3	3	2	2	3	2

1986	4	4	2	3	3	2	2	3	2
1987	4	4	3	3	3	1	2	3	2
1988	4	4	3	3	3	1	2	3	2
1989	4	4	3	3	2	2	2	3	2
1990	1	4	3	3	2	2	2	3	3

When it comes to construction, from 1965 to 1976 the negative structural shift worked in unison with the negative differential shift, while, as of 1977, up until the end of the surveyed period, it prevailed over the effects of the positive differential shift.

Artisanship displayed a continuous negative structural component of productivity, which in 17 years was combined with a negative differential component, whereas in the other years it prevailed over the positive differential shift.

Agriculture and water management were specialized sectors in Vojvodina throughout the surveyed period. Furthermore, in all years (except in 1990) agriculture was also comparatively good and was therefore constantly characterized by the Type 4 allocation effect. Water management, on the other hand, was comparatively inferior for four years (1967, 1970, 1972 and 1973), and was hence a Type 1 sector during these years. As for the remaining years, it was Type 4 (See *Table 2.101*).

Forestry, the manufacturing, construction, transport and communication and catering and tourism were sectors in which Vojvodina's economy did not specialize in a single analyzed year. In the manufacturing and forestry sectors, the years in which they were comparatively good predominated (1965 and 1971-1990 for the manufacturing, and 1969-1976, 1978-1981, 1985, and 1987-1990 for forestry). In these years they were marked by the Type 3 allocation effect and in the others they were Type 2. In the first half of the surveyed period and the last two analyzed years construction was a comparatively bad sector (Type 2 allocation effect), and was comparatively good in the other years (Type 3 allocation effect). In catering and tourism, however, the years in which this sector was comparatively inferior predominated, so that in 1983 and 1984 it was a Type 3 sector and, in the others, a Type 2 sector. According to what the analysis of the differential shift shows, transport and communication were not comparatively good in any of the observed years, and was therefore continuously Type 2.

Changes in the types of allocation effect characterizing Vojvodina's artisanship sector, much like in the case of central Serbia, indicate a complete neglect of this area, at least where employment policy is concerned. In the first six years (1965-1970), employees' share in the employment structure in Vojvodina was below average. At the same time, their productivity was also below average, characterizing the sector in the aforementioned years as a Type 2 sector. Their productivity went up somewhat in the period from 1971 to 1976, exceeding the Yugoslav average and

changing its allocation effect to Type 3. Between 1977 and 1986 (with the exception of 1979, when it was Type 3), productivity dropped to a below-average level, consequently characterizing it as a Type 2 sector again. In the final two years, however, despite still having below-average productivity, the number of employees increased, i.e. Vojvodina specialized in this sector, which then became Type 1.

When the changes in the types of allocation effect characterizing Vojvodina's trade sector are analyzed, what is noticeable is the right orientation when it comes to the meaning of allocation effect types. From 1965 to 1976, trade was a poorly specialized sector, of the Type 1 allocation effect (the exception is 1974, when it was not specialized and was therefore Type 2). This could be the reason behind the downsizing of employees in this sector, which from 1977 to 1988 no longer appeared as a sector that the province specialized in. Furthermore, from 1977 to 1980 it was still comparatively bad (Type 2 allocation effect), while as of 1981, until the end of the surveyed period, it became comparatively good (Type 3 allocation effect).

Chapter N

AVERAGE AND EXTREME VALUES OF LABOR PRODUCTIVITY BY REGION

Table 2.102 gives a survey of the average, maximum and minimum values of labor productivity by region. The majority of regions achieved maximum labor productivity in 1979 and 1980. The only exceptions are Kosovo and Metohia, where the maximum was reached in 1977, and Vojvodina, where the same happened in 1981. From the point of view of regions, Slovenia had the “highest” maximum (of 92,000 dinars of GDP per worker). Kosovo and Metohia was on the opposite pole, with the “lowest” maximum of 51,000 dinars.

Table 2.102 A SURVEY OF AVERAGE AND EXTREME VALUES
OF LABOR PRODUCTIVITY BY REGION

In thousands of dinars

	BIH	MNO	CRO	MAK	SLO	SRB	CES	KIM	VOJ
Maximum									
Year	1979	1980	1979	1979, 1980	1979, 1980	1979, 1980	1979	1977	1981
Value	61	71	77	56	92	69	70	51	76
Minimum									
Year	1965	1965	1965	1965	1965	1965	1965	1965	1965
Value	42	48	45	35	43	43	46	35	39
Average in 1965-1988	53	58	66	48	79	60	60	44	63
Maximum sector average									
Sector	TRD	TRD	TRD	TRD	TRD	TRD	TRD	WAT	TRD
Value	90	93	109	77	142	100	103	79	99
Minimum sector average									
Sector	ART	ART	ART	ART	ART	ART	ART	ART	ART
Value	27	5	30	27	42	28	29	16	28

All regions except Kosovo and Metohia registered their lowest labor productivity in 1965. Macedonia, with 35,000 dinars, and Kosovo and Metohia with 31,000 dinars, are at the bottom of the list, which is topped by central Serbia (with 46,000 dinars of the GDP per worker).

Chapter O

LABOR PRODUCTIVITY: BOUDEVILLE'S MODIFIED TYPOLOGY OF REGIONS

The sum of the values of the structural and differential shift is the net influence of a region's labor productivity on the size of its GDP. If the sum is positive, the region's GDP is higher than hypothetical, i.e. the one the region would have in conditions of average productivity, and vice versa. By its (positive or negative) sign, magnitude, the convergent effect of and the ratio of the structural and differential shift, the region is classified as one of eight possible types, whose characteristics are systematized in *Table 2.103*.

Table 2.103 LABOR PRODUCTIVITY:
BOUDEVILLE'S MODIFIED TYPOLOGY OF REGIONS

Year	BIH	MNO	CRO	MAK	SLO	SRB	CES	KIM	VOJ
1965	8	4	2	5	4	3	1	7	7
1966	7	4	2	5	4	5	3	7	7
1967	7	4	2	5	4	5	5	7	5
1968	7	4	2	5	4	5	5	7	5
1969	7	4	2	5	4	5	5	7	5
1970	7	4	2	5	4	5	5	7	5
1971	7	6	2	5	4	5	5	7	5
1972	7	8	2	5	4	5	5	7	5
1973	7	7	2	5	4	5	5	7	3
1974	7	7	2	5	4	5	5	7	3
1975	7	7	2	5	4	5	5	7	3
1976	7	7	2	5	4	5	5	7	3
1977	7	7	2	5	4	5	5	7	1
1978	7	7	2	5	4	5	5	7	1
1979	7	7	2	5	4	5	5	7	1
1980	7	6	2	5	4	5	5	7	2
1981	7	7	4	5	4	5	5	7	2
1982	7	7	4	5	4	5	5	7	2
1983	7	7	4	5	4	5	5	7	2

1984	7	7	4	5	4	5	5	7	2
1985	7	7	4	5	4	5	5	7	2
1986	7	7	4	5	4	5	5	5	2
1987	7	7	4	5	4	5	5	7	2
1988	7	7	4	5	4	5	5	5	2
1989	7	7	4	6	4	6	2	6	2
1990	7	7	4	6	4	6	4	6	1

GDP of Type 1, 2, 3 and 4 regions is higher than hypothetical, meaning that the net effect of regional labor productivity is positive. Furthermore, Type 1 and 2 regions are characterized, from the point of view of labor productivity, by a favorable structure and above-average productivity. A Type 3 region's GDP is bigger than proportional owing to the predominance of more productive sectors, whereas in a Type 4 region this situation is the result of above-average regional productivity.

GDP of the Type 5, 6, 7, and 8 regions is smaller than proportional, which is to say that the net effect of the structural and differential components of productivity is negative. In the case of a Type 5 region this is the consequence of the existence of non-productive sectors, that is, the region's unfavorable structure, whose effects exceed the positive effects of the differential shift. Type 6 regions, despite the presence of more productive sectors and, consequently a positive structural shift, do not reach the proportional part of GDP, because the negative effects of their sectors' inefficiency (measured by labor productivity) surpass the positive effects of structure. The situation in Type 7 and 8 regions is the consequence of both the unfavorable structure and the sectors' regional inefficiency.

Table 2.103 shows that from the point of view of labor productivity, Yugoslavia's regions can be divided into successful (Croatia and Slovenia), at times (un)successful (Vojvodina, central Serbia and Montenegro), and unsuccessful (Macedonia, Kosovo and Metohia and Bosnia and Herzegovina).

From 1965 to 1980, GDP in Croatia was higher than hypothetical owing to the positive effects of structure and above-average productivity (Type 2), while from 1981 to 1990 this republic owed its success to above-average regional productivity (Type 4).

Above-average regional productivity between 1965 and 1990 determined the nature of Slovenia's success (Type 4).

In the first 13 years Vojvodina's unsuccessfulness was characterized by Type 7 (1965-1966) and Type 5 (1967-1972), while its successful period (1973-1990) consisted of a Type 3 sub-period (1973-1976), Type 1 (1977-1979 and 1990), and Type 2 (1980-1989).

The first year and the last two years of the surveyed period in central Serbia were successful (1965 – Type 1, and 1966 – Type 3), while all of the others were unsuccessful (Type 5).

Montenegro was successful in the first five years (Type 4), while the others were unsuccessful: two years (1971 and 1980) were Type 6, 15 years (1973-1979 and 1981-1990) were Type 7, and one (1972) Type 8.

Macedonia's GDP was smaller than proportional throughout, although the differential shift was positive. It was, however, exceeded by a negative structural shift, making the net effect of the two shifts negative (Type 5).

From the point of view of Boudeville's criteria, Kosovo and Metohia was also unsuccessful: in 1986 and 1987 its non-success was of Type 5, in 1989 and 1990 it was Type 6, and in all other years it was Type 7.

Bosnia and Herzegovina showed the least success: its initial year was Type 8, whereas all other years were characterized by Type 7.

Chapter P

AVERAGE AND SECTORAL CAPITAL-OUTPUT RATIOS OF REGIONS

*T*he manner of presenting the results of the modified analysis of regional changes is almost identical with the presentations in the first part of this book. What is omitted, are the tables on GDP trends, since they are already given there.

The interpretation of results is also identical with their interpretation in the first part of this treatise.

Bosnia and Herzegovina

Table 2.104 shows the trends in the value of the capital-output ratio in the areas of the Bosnia and Herzegovina economy's social sector. The data shows that the efficiency of fixed assets in the republic dropped steadily: the capital-output ratio had the highest value (0.402) in the initial year of the surveyed period – 1965, and the lowest (0.250) in the final year – 1990. In other words, in 1965 one dinar of fixed assets “produced” 0.402 dinars of GDP and in 1990, 0.217 dinars.

In the observed period in the republic, the average capital-output ratio amounted to 0.263. The most efficient on average were the fixed assets of trade which generated one dinar for every dinar of GDP (a capital-output ratio of 0.999). The least efficient on average were the transport and communication sector's fixed assets: one dinar “produced” only 0.122 dinars of GDP.

Table 2.104 BOSNIA AND HERZEGOVINA: EFFICIENCY OF FIXED ASSETS

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	0,402	0,267	-	0,473	0,314	1,961	1,177	0,163	2,099	0,836
1966	0,390	0,313	-	0,480	0,302	1,724	1,033	0,161	2,086	0,680
1967	0,366	0,258	-	0,420	0,276	1,675	0,939	0,164	1,937	0,595
1968	0,367	0,250	-	0,392	0,277	1,615	0,869	0,169	1,920	0,533
1969	0,368	0,260	0,674	0,388	0,271	1,713	0,920	0,175	1,849	0,549
1970	0,360	0,197	0,343	0,397	0,262	1,596	0,949	0,178	1,735	0,547
1971	0,360	0,227	0,385	0,406	0,265	1,182	0,802	0,186	1,752	0,514

1972	0,354	0,253	0,311	0,368	0,265	1,084	0,794	0,177	1,691	0,441
1973	0,348	0,211	0,229	0,356	0,260	1,055	0,710	0,182	1,609	0,436
1974	0,352	0,278	0,291	0,337	0,269	1,056	0,634	0,179	1,639	0,427
1975	0,342	0,250	0,267	0,317	0,266	1,048	0,571	0,169	1,508	0,387
1976	0,318	0,252	0,295	0,303	0,248	0,873	0,547	0,166	1,409	0,365
1977	0,317	0,291	0,205	0,312	0,245	0,930	0,481	0,166	1,413	0,362
1978	0,325	0,278	0,170	0,296	0,248	0,982	0,485	0,176	1,417	0,350
1979	0,320	0,294	0,151	0,295	0,247	1,014	0,436	0,175	1,313	0,345
1980	0,311	0,285	0,132	0,278	0,249	0,845	0,425	0,168	1,258	0,312
1981	0,302	0,270	0,142	0,285	0,250	0,768	0,415	0,164	1,124	0,302
1982	0,285	0,338	0,133	0,269	0,232	0,725	0,413	0,154	1,066	0,304
1983	0,272	0,333	0,124	0,265	0,227	0,581	0,401	0,151	0,993	0,299
1984	0,272	0,322	0,134	0,269	0,234	0,503	0,405	0,147	0,974	0,289
1985	0,273	0,287	0,140	0,265	0,240	0,475	0,408	0,150	0,977	0,268
1986	0,276	0,308	0,136	0,264	0,247	0,469	0,367	0,141	1,005	0,240
1987	0,263	0,273	0,135	0,241	0,241	0,435	0,336	0,127	0,948	0,214
1988	0,250	0,248	0,134	0,228	0,233	0,359	0,326	0,118	0,888	0,206
1989	0,248	0,263	0,132	0,213	0,232	0,391	0,331	0,114	0,858	0,193
1990	0,217	0,245	0,118	0,184	0,210	0,337	0,279	0,089	0,697	0,180

Table 2.105 EFFICIENCY IN BOSNIA AND HERZEGOVINA:
HYPOTHETICAL GDP

In prices 1972

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	18948	451	-	704	11852	517	131	4403	642	248
1966	19851	537	-	695	12374	579	141	4536	681	308
1967	20228	619	-	752	12663	576	143	4417	737	321
1968	20784	667	-	777	13036	616	161	4386	769	373
1969	22695	657	39	793	14447	655	164	4663	882	394
1970	24488	684	61	803	15641	761	169	4909	1013	447
1971	26497	687	63	793	16985	967	214	5165	1140	484
1972	27839	687	87	871	17740	1091	225	5354	1239	545
1973	28626	705	100	895	18267	1130	257	5393	1314	565
1974	31391	768	113	1011	19741	1205	314	6168	1401	671

1975	33073	822	119	1069	20725	1328	406	6350	1487	767
1976	34330	884	116	1057	21848	1367	426	6301	1543	787
1977	37889	938	200	1123	24435	1412	518	6738	1671	855
1978	41195	1037	243	1179	26717	1598	558	7055	1858	949
1979	45036	1086	284	1206	29764	1659	603	7289	2104	1040
1980	46341	1094	297	1213	30722	1721	616	7422	2205	1053
1981	47402	1181	316	1194	31326	1758	625	7681	2282	1038
1982	48100	1066	334	1229	32187	1772	633	7493	2343	1043
1983	48000	1088	341	1221	32173	1756	628	7391	2347	1055
1984	49546	1163	293	1249	32986	1852	651	7881	2380	1093
1985	50289	1172	292	1261	33432	1910	673	8037	2367	1145
1986	51672	1229	296	1277	34500	1928	687	8198	2391	1165
1987	51464	1251	290	1279	34217	2055	680	8206	2331	1154
1988	50452	1249	288	1256	33556	2000	666	8044	2277	1115
1989	50098	1245	286	1260	33194	1990	658	8083	2267	1114
1990	45185	1127	258	1138	29770	1796	592	7455	2049	1000

Table 2.106 EFFICIENCY IN BOSNIA AND HERZEGOVINA:
STRUCTURAL SHIFT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-553	-53	-	301	-2293	1320	125	-2670	2599	117
1966	-460	-17	-	291	-2572	1451	122	-2715	2884	96
1967	-750	-30	-	262	-2886	1507	120	-2500	2740	37
1968	-910	-70	-	201	-2918	1571	124	-2405	2564	24
1969	-1184	-96	-	9140	-3233	1578	127	-2509	2823	15
1970	-1168	-164	-47	149	-3373	1779	134	-2559	2982	-70
1971	-958	-86	-48	141	-3687	1953	159	-2651	3366	-105
1972	-914	-111	-66	127	-3516	2017	174	-2762	3381	-158
1973	-707	-90	-76	109	-3467	1788	189	-2698	3716	-178
1974	-965	-85	-85	60	-3473	1858	198	-3068	3865	-234
1975	-633	-156	-93	57	-3570	2256	298	-3224	4066	-267
1976	-726	-115	-89	47	-3807	2367	321	-3158	4002	-295
1977	-968	-112	-149	68	-4150	2496	331	-3480	4341	-312
1978	-905	-187	-185	-29	-4748	2952	307	-3581	4911	-348

1979	-1046	-174	-217	-56	-5392	3180	239	-3735	5472	-362
1980	-867	-171	-224	-95	-5215	3189	238	-3791	5571	-369
1981	-628	-163	-234	-41	-4553	2972	242	-3961	5465	-355
1982	-568	-36	-245	13	-4632	2634	266	-3949	5720	-338
1983	-360	-25	-246	7	-4070	2097	272	-3806	5728	-318
1984	-294	34	-214	19	-3429	1930	263	-4034	5462	-325
1985	-159	-32	-214	3	-3030	1837	274	-4066	5403	-334
1986	-102	30	-224	-20	-2858	1740	156	-4082	5559	-404
1987	90	20	-217	-32	-2313	1789	85	-3890	5096	-448
1988	88	29	-214	-17	-1940	1466	92	-3722	4793	-399
1989	209	56	-215	-67	-1488	1375	104	-3758	4731	-529
1990	-24	127	-191	-112	-1490	1154	64	-3384	4268	-461

Table 2.107 EFFICIENCY IN BOSNIA AND HERZEGOVINA:
DIFFERENTIAL SHIFT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-1901	-137	-	-284	-1503	360	77	-178	-320	84
1966	-2259	-148	-	-249	-1533	179	59	-204	-421	59
1967	-2379	-220	-	-285	-1717	142	47	-249	-181	83
1968	-1952	-205	-	-263	-1643	148	43	-238	136	69
1969	-2004	-162	52	-215	-2080	389	62	-249	103	96
1970	-2629	-203	35	-205	-2657	308	73	-301	126	196
1971	-3013	-233	42	-173	-2647	-218	32	-241	215	209
1972	-3102	-157	45	-225	-2873	-252	33	-305	438	194
1973	-3091	-245	33	-209	-2950	55	8	-247	238	226
1974	-3476	-161	52	-239	-3336	40	-26	-400	333	262
1975	-3958	-149	54	-273	-3302	-83	-120	-427	93	247
1976	-4878	-183	62	-263	-3806	-597	-134	-390	170	263
1977	-5511	-112	57	-275	-4622	-470	-196	-327	169	266
1978	-5667	-104	48	-245	-4776	-485	-165	-252	52	259
1979	-6605	-84	44	-228	-5305	-475	-160	-238	-411	252
1980	-7214	-95	32	-222	-5201	-1045	-158	-309	-404	190
1981	-7093	-132	43	-209	-5003	-982	-147	-220	-628	186
1982	-7618	16	40	-279	-5819	-669	-139	-184	-802	217
1983	-7803	42	34	-241	-5844	-740	-131	-181	-966	225

1984	-8396	-60	41	-250	-6102	-958	-114	-339	-804	190
1985	-8145	-114	47	-243	-5871	-979	-110	-292	-709	125
1986	-8287	-113	50	-236	-5788	-928	-79	-618	-663	86
1987	-8999	-199	50	-280	-6015	-1033	-49	-1055	-489	70
1988	-9189	-260	54	-300	-5946	-1107	-44	-1191	-431	37
1989	-8684	-201	56	-293	-5893	-754	-31	-1234	-471	137
1990	-7927	-206	49	-233	-4536	-654	-31	-1551	-906	142

Table 2.108 EFFICIENCY IN BOSNIA AND HERZEGOVINA:
RATIO OF HYPOTHETICAL AND REAL GDP

										In %
Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	114.9	172.8	-	97.6	147.1	23.5	39.2	283.2	22.0	55.2
1966	115.9	144.4	-	94.2	149.6	26.2	43.7	280.5	21.7	66.5
1967	118.3	167.9	-	103.1	157.1	25.9	46.2	264.8	22.4	72.8
1968	116.0	170.2	-	108.7	153.8	26.4	49.0	251.7	22.2	79.9
1969	116.3	164.7	63.5	110.4	158.2	25.0	46.5	244.8	23.2	77.9
1970	118.4	216.1	124.4	107.4	162.7	26.7	44.9	239.5	24.6	77.9
1971	117.6	186.7	109.9	104.2	159.5	35.8	52.7	227.2	24.1	82.3
1972	116.9	163.9	133.2	112.6	156.3	38.2	52.1	234.1	24.5	93.8
1973	115.3	190.4	175.3	112.6	154.2	38.0	56.5	220.4	24.9	92.1
1974	116.5	147.3	140.9	121.5	152.7	38.8	64.7	228.5	25.0	96.0
1975	116.1	159.0	149.0	125.3	149.6	37.9	69.5	235.2	26.3	102.6
1976	119.5	150.8	128.9	125.7	153.5	43.6	69.5	228.9	27.0	104.2
1977	120.6	131.4	186.7	122.6	156.0	41.1	79.4	230.0	27.0	105.7
1978	119.0	139.0	227.3	130.3	155.4	39.3	79.7	218.9	27.2	110.4
1979	120.5	131.2	256.0	130.7	156.1	38.0	88.4	219.8	29.4	111.8
1980	121.1	132.1	285.2	135.4	151.3	44.5	88.5	223.5	29.9	120.5
1981	119.5	133.3	252.9	126.5	143.9	46.9	86.9	219.5	32.1	119.4
1982	120.5	101.9	258.6	127.7	148.1	47.4	83.3	223.0	32.3	113.1
1983	120.5	98.5	264.3	123.7	144.5	56.4	81.7	217.1	33.0	109.6
1984	121.3	102.3	245.9	122.7	140.6	65.6	81.4	224.6	33.8	114.1
1985	119.8	114.2	233.6	123.5	136.3	69.0	80.4	218.5	33.5	122.3
1986	119.4	107.2	242.5	125.1	133.4	70.4	90.0	234.3	32.8	137.6
1987	120.9	116.7	236.0	132.3	132.2	73.1	94.9	251.6	33.6	148.6

1988	122.0	122.6	226.5	133.8	130.7	84.8	93.3	256.9	34.3	147.9
1989	120.4	113.2	225.2	140.0	128.6	76.2	90.1	261.5	34.7	154.3
1990	121.4	107.6	224.2	143.5	125.4	78.2	94.7	295.8	37.9	146.7

Table 2.109 EFFICIENCY IN BOSNIA AND HERZEGOVINA:
RATIO OF STRUCTURAL SHIFT AND REAL GDP

In %

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-3.4	-20.3	-	41.7	-28.5	60.1	37.7	-171.8	89.0	26.1
1966	-2.7	-4.5	-	39.5	-31.1	65.7	38.0	-167.9	91.7	20.8
1967	-4.4	-8.1	-	35.9	-35.8	67.7	38.6	-149.9	83.1	8.4
1968	-5.1	-18.0	-	28.0	-34.4	67.3	37.8	-138.0	73.9	5.2
1969	-6.1	-24.1	-47.3	19.5	-35.4	60.2	35.9	-131.7	74.1	3.0
1970	-5.6	-51.9	-95.5	20.0	-35.1	62.5	35.6	-124.8	72.4	-12.2
1971	-4.3	-23.3	-83.5	18.5	-34.6	72.3	39.3	-116.6	71.3	-17.9
1972	-3.8	-26.4	-102.1	16.4	-31.0	70.6	40.2	-120.8	66.8	-27.1
1973	-2.8	-24.3	-132.9	13.7	-29.3	60.1	41.7	-110.3	70.5	-29.0
1974	-3.6	-16.4	-106.4	7.2	-26.9	59.9	40.7	-113.7	69.0	-33.5
1975	-2.2	-30.2	-116.1	6.7	-25.8	64.4	51.0	-119.4	72.0	-35.7
1976	-2.5	-19.5	-98.3	5.5	-26.7	75.5	52.4	-114.7	70.0	-39.0
1977	-3.1	-15.7	-139.6	7.4	-26.5	72.6	50.7	-118.8	70.2	-38.5
1978	-2.6	-25.0	-172.6	-3.2	-27.6	72.6	43.9	-111.1	72.0	-40.4
1979	-2.8	-21.0	-195.4	-6.0	-28.3	72.9	35.0	-112.6	76.4	-38.9
1980	-2.3	-20.6	-215.5	-10.6	-25.7	82.5	34.2	-114.2	75.6	-42.3
1981	-1.6	-18.3	-187.3	-4.4	-20.9	79.3	33.6	-113.2	76.8	-40.8
1982	-1.4	-3.4	-189.9	1.3	-21.3	70.5	35.0	-117.5	78.8	-36.7
1983	-0.9	-2.3	-190.6	0.7	-18.3	67.4	35.4	-111.8	80.6	-33.0
1984	-0.7	3.0	-180.2	1.9	-14.6	68.3	32.9	-115.0	77.6	-34.0
1985	-0.4	-3.1	-171.1	0.3	-12.4	66.4	32.7	-110.5	76.5	-35.7
1986	-0.2	2.6	-183.7	-1.9	-11.1	63.5	20.4	-116.7	76.3	-47.7
1987	0.2	1.8	-176.8	-3.3	-8.9	63.6	11.9	-119.3	73.5	-57.6
1988	0.2	2.9	-168.7	-1.9	-7.6	62.1	12.9	-118.9	72.2	-52.9
1989	0.5	5.1	-169.5	-7.4	-5.8	52.7	14.2	-121.6	72.5	-73.3
1990	-0.1	12.1	-166.5	-14.1	-6.3	50.3	10.3	-134.3	78.9	-67.5

Table 2.110 EFFICIENCY IN BOSNIA AND HERZEGOVINA:
RATIO OF DIFFERENTIAL SHIFT AND REAL GDP

In %

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-11.5	-52.5	-	-39.3	-18.7	16.4	23.1	-11.5	-10.9	18.8
1966	-13.2	-39.9	-	-33.7	-18.5	8.1	18.3	-12.6	-13.4	12.8
1967	-13.9	-59.8	-	-39.0	-21.3	6.4	15.2	-14.9	-5.5	18.8
1968	-10.9	-52.2	-	-36.7	-19.4	6.3	13.2	-13.6	3.9	14.8
1969	-10.3	-40.6	83.8	-30.0	-22.8	14.8	17.5	-13.1	2.7	19.0
1970	-12.7	-64.2	71.1	-27.4	-27.6	10.8	19.4	-14.7	3.0	34.2
1971	-13.4	-63.4	73.7	-22.7	-24.9	-8.1	7.9	-10.6	4.6	35.6
1972	-13.0	-37.5	69.0	-29.0	-25.3	-8.8	7.7	-13.3	8.7	33.3
1973	-12.5	-66.2	57.6	-26.3	-24.9	1.9	1.8	-10.1	4.5	36.9
1974	-12.9	-30.9	65.4	-28.8	-25.8	1.3	-5.4	-14.8	5.9	37.5
1975	-13.9	-28.8	67.2	-32.0	-23.8	-2.4	-20.6	-15.8	1.7	33.1
1976	-17.0	-31.3	69.4	-31.2	-26.7	-19.0	-21.9	-14.2	3.0	34.8
1977	-17.5	-15.6	52.8	-30.0	-29.5	-13.7	-30.1	-11.2	2.7	32.9
1978	-16.4	-14.0	45.3	-27.1	-27.8	-11.9	-23.6	-7.8	0.8	30.1
1979	-17.7	-10.1	39.4	-24.7	-27.8	-10.9	-23.4	-7.2	-5.7	27.1
1980	-18.9	-11.5	30.3	-24.8	-25.6	-27.1	-22.7	-9.3	-5.5	21.8
1981	-17.9	-14.9	34.4	-22.1	-23.0	-26.2	-20.5	-6.3	-8.8	21.4
1982	-19.1	1.5	31.3	-29.0	-26.8	-17.9	-18.2	-5.5	-11.0	23.6
1983	-19.6	3.8	26.3	-24.5	-26.3	-23.8	-17.1	-5.3	-13.6	23.4
1984	-20.5	-5.3	34.3	-24.6	-26.0	-33.9	-14.3	-9.7	-11.4	19.9
1985	-19.4	-11.1	37.5	-23.8	-23.9	-35.4	-13.1	-7.9	-10.0	13.4
1986	-19.1	-9.8	41.2	-23.1	-22.4	-33.8	-10.3	-17.7	-9.1	10.2
1987	-21.1	-18.5	40.8	-28.9	-23.2	-36.7	-6.8	-32.4	-7.0	9.1
1988	-22.2	-25.5	42.1	-31.9	-23.2	-46.9	-6.2	-38.1	-6.5	4.9
1989	-20.9	-18.3	44.3	-32.6	-22.8	-28.9	-4.3	-39.9	-7.2	18.9
1990	-21.3	-19.7	42.3	-29.4	-19.1	-28.5	-4.9	-61.5	-16.7	20.9

Bosnia and Herzegovina's real GDP was below hypothetical during the entire surveyed period (*Table 2.108*). This was the cumulative consequence of a negative structural and differential shift (*Tables 2.109* and *2.110*). The differential shift was negative, i.e. the sectoral efficiency of fixed assets was lower than the Yugoslav average throughout the analyzed period. The structural shift was just above zero for only

three years (1987, 1988, and 1989), when it accounted for 0.2% of real GDP. Also observed is a tendency of relative growth in the inefficiency of fixed assets. Owing to the relatively low efficiency of fixed assets, the economy of Bosnia and Herzegovina lost between 14.9% in 1965 and 22% in 1988 of GDP.

Construction, artisanship, and trade were the only sectors whose real GDP was higher than hypothetical during the entire surveyed period. This was primarily the result of their positive structural shift. Bosnia and Herzegovina's construction sector had higher sectoral productivity than the Yugoslav average during eight years (1965-1970 and 1973-1974). Artisanship achieved the same in nine years (1965-1973), and trade in eleven years (1968-1978).

Catering and tourism was the only sector with a positive differential shift in the entire surveyed period. Its real GDP, however, was higher than hypothetical only in the first ten years (1965-1974). As of 1975, higher sectoral productivity was insufficient to prevail over the structural component's negative effects.

Forestry's real GDP exceeded hypothetical GDP during two years (1965 and 1966), while agriculture and water management achieved the same in one year each: the former in 1984, and the latter in 1969. In the case of forestry, this was the result of a positive structural shift which annulled the negative effects of the fixed assets efficiency's differential component. In this sector, the differential shift was negative throughout the surveyed period. Agriculture had higher sectoral labor productivity in only two years (1982 and 1983), while in 1983 its real GDP was higher than hypothetical as the result of a positive differential shift that was registered that year. The reason why water management's fixed assets efficiency was higher than the Yugoslav average during one year, despite a continuously positive differential shift, lied in the steady, substantially unfavorable influence of the structural component.

Table 2.111 EFFICIENCY IN BOSNIA AND HERZEGOVINA:
NET DIFFERENTIAL SHIFT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-1625	-320	-	-101	-1326	433	111	-197	-390	165
1966	-2098	-324	-	-92	-1356	202	82	-224	-495	109
1967	-2157	-435	-	-100	-1514	165	65	-273	-230	165
1968	-1635	-386	-	-92	-1441	172	56	-262	183	134
1969	-1111	-349	486	-79	-1799	479	83	-272	139	199
1970	-1798	-446	220	-76	-2272	364	100	-327	174	465
1971	-2210	-532	298	-66	-2269	-224	38	-263	294	514
1972	-2120	-367	237	-82	-2464	-248	39	-331	620	476
1973	-2355	-572	152	-77	-2528	55	9	-274	316	564
1974	-2467	-377	237	-87	-2897	41	-27	-425	455	613

1975	-3097	-334	242	-97	-2915	-82	-106	-453	123	525
1976	-3851	-402	298	-94	-3323	-604	-118	-421	229	584
1977	-4396	-248	172	-101	-3990	-507	-165	-369	229	583
1978	-4648	-225	127	-92	-4126	-506	-145	-292	70	542
1979	-5712	-182	104	-89	-4561	-523	-154	-286	-528	508
1980	-6484	-207	71	-87	-4460	-1138	-156	-378	-512	385
1981	-6457	-270	89	-84	-4308	-1063	-148	-268	-787	383
1982	-6590	37	79	-113	-4952	-726	-144	-233	-991	454
1983	-6805	94	63	-100	-4986	-791	-138	-231	-1175	458
1984	-7524	-132	91	-104	-5231	-1002	-120	-422	-987	382
1985	-7410	-248	105	-102	-5029	-1024	-115	-365	-875	243
1986	-7651	-242	126	-99	-4944	-976	-83	-779	-819	166
1987	-8447	-417	128	-119	-5157	-1034	-52	-1321	-611	137
1988	-8754	-540	134	-128	-5094	-1120	-47	-1491	-540	74
1989	-8112	-420	139	-126	-5046	-765	-33	-1539	-591	268
1990	-7767	-434	119	-100	-3883	-666	-33	-1913	-1140	282

Table 2.112 EFFICIENCY IN BOSNIA AND HERZEGOVINA:
ALLOCATION EFFECT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-276	183	-	-182	-178	-73	-34	19	70	-81
1966	-161	176	-	-157	-177	-23	-23	20	74	-50
1967	-222	215	-	-184	-203	-23	-18	25	48	-82
1968	-317	181	-	-171	-203	-24	-13	24	-48	-65
1969	-893	187	-435	-136	-281	-90	-21	22	-36	-103
1970	-831	242	-185	-128	-385	-56	-27	26	-49	-269
1971	-803	299	-256	-106	-378	6	-6	22	-79	-305
1972	-982	210	-193	-142	-409	-5	-6	26	-182	-283
1973	-736	327	-119	-132	-422	0	-1	27	-78	-338
1974	-1009	216	-184	-153	-440	-1	0	25	-122	-351
1975	-861	186	-188	-176	-387	-0	-14	26	-30	-277
1976	-1027	219	-236	-168	-483	6	-17	31	-58	-321
1977	-1115	137	-115	-174	-632	37	-32	41	-61	-317
1978	-1019	121	-78	-153	-650	21	-20	40	-17	-284

1979	-893	98	-60	-138	-744	48	-6	48	117	-255
1980	-730	112	-39	-135	-741	93	-2	69	108	-194
1981	-636	138	-46	-125	-695	81	1	48	159	-197
1982	-1028	-20	-39	-166	-866	57	5	49	189	-236
1983	-998	-52	-29	-142	-858	51	7	50	209	-234
1984	-871	72	-50	-146	-872	44	6	83	183	-192
1985	-735	135	-59	-141	-842	45	6	73	166	-118
1986	-636	129	-76	-137	-844	48	5	161	156	-79
1987	-553	219	-77	-161	-858	1	3	266	122	-67
1988	-435	280	-80	-171	-852	13	3	300	109	-36
1989	-572	219	-83	-168	-847	11	2	305	120	-131
1990	-160	227	-71	-133	-653	12	2	362	234	-140

Table 2.113 EFFICIENCY IN BOSNIA AND HERZEGOVINA:
TYPES OF ALLOCATION EFFECT

Year	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	2	-	1	1	3	3	2	2	3
1966	2	-	1	1	3	3	2	2	3
1967	2	-	1	1	3	3	2	2	3
1968	2	-	1	1	3	3	2	3	3
1969	2	3	1	1	3	3	2	3	3
1970	2	3	1	1	3	3	2	3	3
1971	2	3	1	1	2	3	2	3	3
1972	2	3	1	1	1	3	2	3	3
1973	2	3	1	1	4	3	2	3	3
1974	2	3	1	1	3	2	2	3	3
1975	2	3	1	1	1	1	2	3	3
1976	2	3	1	1	2	1	2	3	3
1977	2	3	1	1	2	1	2	3	3
1978	2	3	1	1	2	1	2	3	3
1979	2	3	1	1	2	1	2	2	3
1980	2	3	1	1	2	1	2	2	3
1981	2	3	1	1	2	2	2	2	3
1982	3	3	1	1	2	2	2	2	3
1983	3	3	1	1	2	2	2	2	3

1984	2	3	1	1	2	2	2	2	3
1985	2	3	1	1	2	2	2	2	3
1986	2	3	1	1	2	2	2	2	3
1987	2	3	1	1	2	2	2	2	3
1988	2	3	1	1	2	2	2	2	3
1989	2	3	1	1	2	2	2	2	3
1990	2	3	1	1	2	2	2	2	3

The manufacturing and transport and communication in Bosnia and Herzegovina are sectors which never had an efficiency of fixed assets higher than or equal to the Yugoslav average. In the case of the manufacturing, this was primarily the consequence of a continuously negative differential shift which annulled the effects of the structural shift in the years when the latter was positive. In transport and communication, on the other hand, there was a convergent effect of the negative value of both shifts.

Specialization in the manufacturing and forestry, i.e. the above-average concentration of fixed assets in these two comparatively bad sectors, led to both of them being marked as Type 1 allocation effect sectors (*Table 2.113*).

Although Bosnia and Herzegovina was continuously comparatively good in two sectors – water management and catering and tourism – it did not specialize in them, making them Type 3 sectors.

Agriculture and transport and communication, the two sectors that throughout the surveyed period had a lower sectoral productivity than the Yugoslav average, were not specialized in a single year and were thus characterized by the Type 2 allocation effect.

Construction was characterized by every type of allocation effect. In the first six years (1965-1970) it was comparatively good but not specialized in (Type 3 allocation effect), while in the next five years its type alternated: the sector was Type 2 in 1971 (non-specialization and comparatively inferior position), Type 1 in 1972 (specialization and a comparatively inferior position), Type 4 in 1973 (specialization and a comparatively good position), Type 1 in 1974 (non-specialization and a comparatively good position), and Type 1 again in 1975. From 1976 to 1990, this sector, being unchangingly comparatively bad and non-specialized, was characterized by the Type 2 allocation effect.

By share of the value of its fixed assets in the structure of the value of the Bosnia and Herzegovina economy's fixed assets, the republic's trade sector did not appear as specialized in a single year of the surveyed period. Furthermore, in the first three years (1965-1967) and the last 12 years (1979-1990) it was comparatively inferior from the point of view of the efficiency of fixed assets, being consequently characterized by the Type 2 allocation effect. In all other years it was Type 3.

Montenegro

Data on efficiency trends of the Montenegrin social sector economy is shown in *Table 2.114*. It should be noted that the values obtained for the capital-output ratio of water management in the 1971-1976 period are based on imprecise data. According to the number of employed and the value of fixed assets, this Montenegrin sector was almost negligible, and the approximation of the data produced erroneous results that could not be used as reliable indicators for capital-output ratio trends in this sector. For that reason, the results obtained for this sector will not be interpreted.

In 1970 fixed assets were the most efficient on average, and the capital-output ratio was 0.312. Much like in the case of Bosnia and Herzegovina, minimum efficiency was registered in the last year of the surveyed period – 1990, when one dinar in the value of fixed assets “produced” only 0.165 dinars of Montenegro’s GDP.

In this period trade’s fixed assets were the most efficient: their capital-output ratio amounted to 0.752. Transport and communication, on the other hand, were the least efficient sector: on average one dinar in fixed assets “gave” only 0.155 dinars of GDP.

Table 2.114 MONTENEGRO: EFFICIENCY OF FIXED ASSETS

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	0,310	0,430	-	1,262	0,197	1,670	0,290	0,183	1,695	0,297
1966	0,283	0,409	-	1,213	0,196	1,271	0,243	0,153	1,486	0,346
1967	0,281	0,419	-	1,039	0,189	1,268	0,245	0,165	1,173	0,257
1968	0,282	0,370	-	0,782	0,196	1,325	0,242	0,168	1,087	0,224
1969	0,301	0,306	-	0,623	0,210	1,502	0,253	0,178	1,152	0,238
1970	0,312	0,355	-	0,616	0,209	1,386	0,257	0,187	1,193	0,261
1971	0,296	0,330	3,000	0,572	0,186	1,323	0,240	0,178	1,363	0,243
1972	0,298	0,241	3,000	0,498	0,190	1,427	0,270	0,172	1,238	0,222
1973	0,285	0,240	3,000	0,455	0,186	1,124	0,239	0,180	1,237	0,234
1974	0,275	0,237	4,000	0,466	0,189	0,935	0,222	0,177	1,199	0,223
1975	0,250	0,228	4,000	0,466	0,157	0,932	0,220	0,167	1,195	0,180
1976	0,239	0,248	4,000	0,459	0,148	0,994	0,179	0,165	1,132	0,195
1977	0,221	0,209	0,455	0,470	0,159	1,041	0,166	0,116	1,139	0,187
1978	0,220	0,201	0,455	0,421	0,162	1,015	0,155	0,114	1,130	0,185
1979	0,229	0,227	0,667	0,490	0,175	0,973	0,119	0,121	1,191	0,107
1980	0,273	0,265	0,500	0,417	0,182	1,252	0,099	0,170	1,383	0,207
1981	0,250	0,287	0,315	0,378	0,175	1,172	0,082	0,157	1,023	0,211

1982	0,228	0,403	0,310	0,425	0,155	1,061	0,066	0,141	1,008	0,174
1983	0,218	0,462	0,303	0,400	0,154	0,789	0,071	0,157	0,878	0,171
1984	0,222	0,377	0,268	0,409	0,179	0,622	0,069	0,163	0,779	0,159
1985	0,221	0,351	0,181	0,399	0,179	0,558	0,067	0,168	0,774	0,169
1986	0,223	0,425	0,174	0,403	0,178	0,544	0,053	0,185	0,745	0,147
1987	0,200	0,421	0,147	0,371	0,163	0,453	0,040	0,160	0,683	0,135
1988	0,192	0,333	0,100	0,348	0,160	0,325	0,027	0,165	0,641	0,150
1989	0,190	0,402	0,100	0,345	0,162	0,393	0,026	0,152	0,613	0,116
1990	0,165	0,362	0,100	0,274	0,133	0,315	0,20	0,150	0,537	0,111

Table 2.115 EFFICIENCY IN MONTENEGRO: HYPOTHETICAL GDP

1972 prices

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	3811	65	-	39	2320	121	31	859	118	257
1966	4254	77	-	40	2404	141	33	1145	131	284
1967	4214	77	-	44	2305	143	36	1094	182	331
1968	4372	80	-	57	2299	149	38	1134	201	415
1969	4648	84	-	71	2429	157	39	1193	217	458
1970	4832	85	-	75	2464	191	40	1266	232	478
1971	5327	86	0	82	2735	198	39	1388	248	550
1972	5485	101	0	95	2752	206	38	1413	291	589
1973	5527	125	0	102	2767	205	44	1402	284	599
1974	6264	145	0	107	3158	224	48	1578	325	678
1975	6777	152	0	106	3584	248	47	1621	342	676
1976	7124	153	0	102	3962	241	58	1598	339	671
1977	8734	167	4	109	4562	259	69	2442	361	759
1978	9582	168	4	121	4959	270	81	2750	406	823
1979	9138	157	2	100	5011	303	108	2499	387	572
1980	9268	151	2	105	4998	323	131	2541	401	616
1981	9574	148	5	109	5091	364	154	2627	417	660
1982	9851	146	4	112	5227	371	189	2622	422	757
1983	9753	134	4	107	5158	353	179	2632	443	743
1984	10200	176	5	114	5379	376	190	2695	481	782
1985	10315	184	5	119	5406	388	195	2744	490	784

1986	10763	190	6	122	5713	399	199	2828	515	792
1987	10937	194	6	125	5752	415	207	2943	513	781
1988	10636	188	6	125	5585	401	201	2844	502	785
1989	10537	185	6	125	5515	402	197	2815	501	792
1990	9426	153	5	113	4937	369	174	2512	449	712

Table 2.116 EFFICIENCY IN MONTENEGRO: STRUCTURAL SHIFT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-22	-8	-	17	-449	310	30	-521	478	122
1966	-145	-2	-	17	-500	352	29	-685	555	89
1967	-13	-4	-	15	-525	374	30	-620	678	38
1968	-24	-8	-	15	-515	381	29	-622	668	27
1969	-66	-12	-	13	-544	378	30	-642	694	18
1970	-108	-20	-	14	-531	448	32	-660	684	-75
1971	-259	-11	-0	15	-594	401	29	-712	733	-119
1972	-244	-16	-0	14	-545	381	29	-729	793	-170
1973	-260	-16	-0	12	-525	324	32	-701	802	-189
1974	-315	-16	-0	6	-556	346	30	-785	896	-237
1975	-307	-29	-0	6	-617	421	34	-823	936	-235
1976	-417	-20	-0	5	-690	418	44	-801	880	-251
1977	-889	-20	-3	7	-775	458	44	-1262	939	-277
1978	-999	-30	-3	-3	-881	498	44	-1396	1073	-302
1979	-791	-25	-2	-5	-908	580	43	-1281	1005	-199
1980	-732	-23	-2	-8	-848	599	51	-1298	1014	-216
1981	-675	-20	-3	-4	-740	615	60	-1355	998	-225
1982	-725	-5	-3	1	-752	551	79	-1382	1031	-246
1983	-656	-3	-3	1	-653	422	77	-1355	1081	-224
1984	-594	5	-4	2	-559	392	77	-1380	1105	-233
1985	-546	-5	-4	0	-490	373	79	-1388	1118	-229
1986	-557	5	-4	-2	-473	360	45	-1408	1196	-275
1987	-582	3	-5	-3	-389	361	26	-1395	1122	-303
1988	-542	4	-5	-2	-323	294	28	-1316	1057	-280
1989	-582	8	-4	-7	-247	278	31	-1309	1044	-376
1990.	-523	17	-4	-11	-247	237	19	-1140	934	-328

Table 2.117 EFFICIENNCY IN MONTENEGRO: DIFFERENTIAL SHIFT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-1231	3	-	51	-879	8	-41	3	-162	-213
1966	-1440	-5	-	51	-862	-97	-45	-72	-255	-155
1967	-1466	1	-	46	-772	-99	-46	-58	-366	-173
1968	-1455	-2	-	33	-728	-66	-46	-65	-357	-224
1969	-1318	-12	-	20	-693	16	-45	-56	-327	-221
1970	-1190	6	-	19	-723	-17	-48	-51	-267	-111
1971	-1341	-8	3	14	-936	21	-46	-93	-182	-115
1972	-1297	-26	3	5	-944	123	-43	-97	-215	-103
1973	-1340	-34	3	1	-960	45	-50	-72	-211	-61
1974	-1747	-45	4	8	-1147	-59	-52	-113	-271	-73
1975	-2210	-36	4	13	-1547	-87	-55	-117	-249	-135
1976	-2235	-34	4	17	-1730	-29	-74	-103	-209	-76
1977	-2798	-56	4	19	-1895	-11	-83	-442	-223	-111
1978	-3134	-50	4	14	-1992	-59	-93	-542	-290	-127
1979	-2908	-40	3	32	-1822	-119	-117	-433	-198	-215
1980	-1820	-21	2	20	-1729	154	-148	-96	59	-62
1981	-2250	-10	3	9	-1872	204	-179	-125	-231	-49
1982	-2583	30	3	25	-2124	222	-232	-162	-215	-129
1983	-2616	58	3	23	-2077	75	-218	-12	-338	-131
1984	-2737	20	3	26	-1899	-58	-227	17	-447	-171
1985	-2810	18	2	26	-1968	-100	-234	48	-450	-151
1986	-2930	50	2	29	-2152	-101	-212	169	-549	-166
1987	-3477	59	1	24	-2415	-185	-208	-72	-535	-147
1988	-3370	13	0	20	-2322	-267	-211	16	-502	-117
1989	-3238	56	1	27	-2266	-149	-211	-71	-516	-108
1990	-3000	40	1	16	-2208	-166	-180	53	-470	-85

Table 2.118 EFFICIENCY IN MONTENEGRO:
RATIO OF HYPOTHETICAL AND REAL GDP

In %

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	148.9	107.3	-	36.6	233.9	27.6	159.3	251.6	27.2	155.1
1966	159.4	110.4	-	37.2	230.7	35.5	185.8	295.4	30.4	130.7
1967	154.1	103.5	-	41.7	228.7	34.2	177.2	262.7	36.9	168.6
1968	151.1	115.1	-	54.5	217.7	32.1	176.3	253.5	39.2	190.5
1969	142.4	140.1	-	68.7	203.6	28.5	169.0	240.8	37.2	179.6
1970	136.7	120.1	-	69.2	203.6	30.8	165.6	228.0	35.7	163.4
1971	142.9	128.4	14.1	74.0	227.0	32.0	176.2	238.1	31.0	174.4
1972	139.1	172.2	13.8	83.2	218.1	29.0	153.7	240.5	33.5	186.8
1973	140.8	167.0	13.4	88.2	216.0	35.7	168.2	223.3	32.4	171.6
1974	149.1	173.3	10.2	88.0	216.9	43.9	184.5	231.9	34.2	184.1
1975	159.1	174.5	9.9	85.2	252.6	42.6	180.3	238.1	33.3	220.6
1976	159.3	153.4	9.5	82.9	257.1	38.3	212.6	230.1	33.6	195.2
1977	173.0	182.6	84.0	81.2	241.0	36.7	229.7	330.6	33.5	204.5
1978	175.9	191.7	84.9	91.6	237.7	38.0	249.1	338.5	34.2	208.4
1979	168.0	170.2	57.8	78.6	219.7	39.6	324.1	318.2	32.4	361.9
1980	138.0	142.0	75.3	90.2	206.4	30.1	380.7	221.5	27.2	182.2
1981	144.0	125.4	114.4	95.3	205.4	30.7	441.0	229.0	35.2	170.9
198	150.6	85.4	110.9	80.9	222.3	32.4	524.6	243.2	34.1	198.1
1983	150.5	70.9	108.2	81.9	212.4	41.5	459.1	208.2	37.3	191.4
1984	148.5	87.4	122.7	80.5	184.2	52.9	476.1	202.2	42.3	206.9
1985	148.2	93.2	181.2	82.1	183.4	58.7	487.0	195.5	42.3	194.0
1986	147.9	77.6	189.1	81.8	185.0	60.7	620.7	178.0	44.3	225.1
1987	159.0	75.7	216.5	85.9	195.1	70.2	798.0	199.4	46.6	236.0
1988	158.2	91.5	304.5	87.5	190.0	93.8	1116.3	184.2	47.5	202.7
1989	156.9	74.2	297.9	86.3	183.8	75.7	1156.6	196.1	48.6	257.3
1990	159.7	72.9	263.9	96.2	198.9	83.8	1339.7	176.3	49.1	238.3

Table 2.119 EFFICIENCY IN MONTENEGRO:
RATIO OF STRUCTURAL SHIFT AND REAL GDP

In %

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-0.9	-12.6	-	15.6	-45.3	70.6	153.1	-152.6	110.2	73.2
1966	-5.4	-3.4	-	15.6	-47.9	89.1	161.5	-176.8	128.8	40.8
1967	-0.5	-5.0	-	14.5	-52.1	89.5	148.2	-148.7	137.2	19.5
1968	-0.8	-12.2	-	14.1	-48.7	82.0	135.9	-139.0	130.5	12.5
1969	-2.0	-20.5	-	12.2	-45.6	68.6	130.5	-129.6	119.0	7.0
1970	-3.1	-28.8	-	12.9	-43.9	72.0	131.4	-118.8	105.3	-25.5
1971	-6.9	-16.0	-10.7	13.1	-49.3	64.6	131.3	-122.2	91.7	-37.8
1972	-6.2	-27.7	-10.6	12.1	-43.2	53.7	118.4	-124.0	91.3	-54.0
1973	-6.6	-21.3	-10.1	10.7	-41.0	56.4	124.0	-111.7	91.7	-54.0
1974	-7.5	-19.3	-7.7	5.3	-38.2	67.6	116.1	-115.3	94.3	-64.3
1975	-7.2	-33.1	-7.7	4.5	-43.5	72.4	132.3	-120.9	90.9	-76.7
1976	-9.3	-19.9	-7.3	3.7	-44.8	66.3	160.2	-115.3	87.1	-73.0
1977	-17.6	-21.9	-62.8	4.9	-40.9	64.9	146.6	-170.8	87.1	-74.6
1978	-18.3	-34.5	-64.5	-2.2	-42.2	70.2	137.1	-171.8	90.3	-76.4
1979	-14.5	-27.3	-44.1	-3.6	-39.8	75.9	128.3	-163.1	84.2	-126.0
1980	-10.9	-22.1	-56.9	-7.1	-35.0	55.7	147.3	-113.2	68.8	-63.9
1981	-10.2	-17.3	-84.7	-3.3	-29.8	52.0	170.5	-118.1	84.3	-58.4
1982	-11.1	-2.9	-81.5	0.8	-32.0	48.2	220.4	-128.2	83.3	-64.3
1983	-10.1	-1.6	-78.0	0.5	-26.9	49.6	198.7	-107.2	91.2	-57.6
1984	-8.6	2.6	-89.9	1.2	-19.1	55.2	192.6	-103.5	97.0	-61.6
1985	-7.8	-2.6	-132.7	0.2	-16.6	56.4	198.2	-98.9	96.6	-56.6
1986	-7.6	1.9	-143.3	-1.3	-15.3	54.8	140.5	-88.6	103.0	-78.1
1987	-8.5	1.2	-162.2	-2.2	-13.2	61.1	100.3	-94.5	101.9	-91.5
1988	-8.1	2.2	-226.7	-1.2	-11.0	68.7	154.5	-85.2	100.0	-72.5
1989	-8.7	3.3	-224.2	-4.6	-8.2	52.3	182.4	-91.1	101.5	-122.2
1990	-8.9	8.2	-196.0	-9.5	-10.0	53.8	145.4	-80.0	102.3	-109.7

Table 2.120 EFFICIENCY IN MONTENEGRO:
RATIO OF DIFFERENTIAL SHIFT AND REAL GDP

In %

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-48.1	5.3	-	47.8	-88.6	1.8	-212.4	1.0	-37.4	-128.3
1966	-54.0	-6.9	-	47.2	-82.7	-24.6	-247.3	-18.6	-59.2	-71.5
1967	-53.6	1.5	-	43.8	-76.6	-23.6	-225.4	-14.0	-74.1	-88.1
1968	-50.3	-3.0	-	31.5	-69.0	-14.1	-212.2	-14.5	-69.7	-103.0
1969	-40.4	-19.6	-	19.1	-58.0	2.9	-199.5	-11.2	-56.1	-86.6
1970	-33.7	8.7	-	17.9	-59.7	-2.7	-197.0	-9.2	-41.0	-37.9
1971	-36.0	-12.4	96.6	12.9	-77.7	3.4	-207.5	-15.9	-22.7	-36.5
1972	-32.9	-44.4	96.8	4.7	-74.8	17.3	-172.1	-16.4	-24.8	-32.8
1973	-34.1	-45.8	96.8	1.0	-75.0	7.9	-192.2	-11.5	-24.1	-17.6
1974	-41.6	-54.0	97.5	6.7	-78.8	-11.5	-200.6	-16.5	-28.5	-19.8
1975	-51.9	-41.3	97.8	10.3	-109.1	-15.0	-212.6	-17.2	-24.2	-43.9
1976	-50.0	-33.6	97.7	13.5	-112.3	-4.6	-272.7	-14.8	-20.7	-22.2
1977	-55.4	-60.8	78.8	13.8	-100.1	-1.6	-276.3	-59.8	-20.7	-29.9
1978	-57.5	-57.2	79.6	10.6	-95.5	-8.3	-286.2	-66.7	-24.4	-32.0
1979	-53.5	-42.9	86.3	25.0	-79.9	-15.6	-352.4	-55.1	-16.6	-135.8
1980	-27.1	-19.9	81.6	16.9	-71.4	14.3	-428.0	-8.3	4.0	-18.2
1981	-33.8	-8.1	70.3	7.9	-75.5	17.3	-511.6	-10.9	-19.6	-12.6
1982	-39.5	17.5	70.5	18.3	-90.3	19.4	-645.0	-15.0	-17.4	-33.9
1983	-40.4	30.7	69.8	17.6	-85.5	8.9	-557.8	-1.0	-28.5	-33.7
1984	-39.8	10.0	67.2	18.2	-65.0	-8.1	-568.7	1.3	-39.3	-45.3
1985	-40.4	9.3	51.5	17.7	-66.8	-15.1	-585.2	3.4	-38.9	-37.4
1986	-40.3	20.5	54.1	19.4	-69.7	-15.4	-661.2	10.6	-47.2	-47.0
1987	-50.6	23.1	45.7	16.3	-81.9	-31.3	-798.3	-4.9	-48.6	-44.5
1988	-50.1	6.4	22.2	13.7	-79.0	-62.4	-1170.9	1.0	-47.5	-30.3
1989	-48.2	22.5	26.3	18.3	-75.5	-28.1	-1239.1	-4.9	-50.1	-35.1
1990	-50.8	18.9	32.1	13.3	-89.0	-37.6	-1385.1	3.7	-51.5	-28.6

During every year of the surveyed period Montenegro's social sector GDP was lower than hypothetical, i.e. the one Montenegro's economy would have achieved had its fixed assets been averagely efficient in terms of Yugoslavia as a whole (Table 2.118). Owing to the lower efficiency of its fixed assets, the Montenegrin economy's loss was the smallest in 1970 – 36.7% of that year's GDP, while it was the highest

in 1978, at 75.9%. The lower efficiency of the Montenegrin economy's fixed assets and, consequently, a real GDP lower than hypothetical, was the result of the negative influence of both the structural and differential component (*Tables 2.119 and 2.120*). The negative structural shift indicates that sectors with below-average efficiency of fixed assets prevailed in the republic. The negative influence of structure was particularly prominent in the period from 1977 to 1983, when every year the loss exceeded 10% of GDP, reaching up to 18.3% in 1978.

Losses in the value of Montenegro's GDP resulted from the lower sectoral efficiency of fixed assets, which were no less than one-third every year, at 33% in 1972. The biggest loss in this area was registered by the Montenegrin economy in 1978, when owing to the lower sectoral efficiency of fixed assets the republic's GDP decreased by 57.5%.

Forestry, construction and trade are sectors which during the entire surveyed period had a real GDP higher than hypothetical. In the case of forestry, this was the result of the continuously higher sectoral efficiency of fixed assets (a positive differential shift), which even during the years that the sector had a negative structural shift (1978-1981 and 1986-1990) provided for a positive total shift. In construction and trade the fact that real GDP was higher than hypothetical owed primarily to the positive structural shift in every year of the surveyed period. In the case of construction, the differential shift was positive for nine years (1965, 1969, 1971-1973 and 1980-1983) and, in the case of trade, only in one year –1980.

Table 2.121 EFFICIENCY IN MONTENEGRO: NET DIFFERENTIAL SHIFT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-1056	10	-	66	-797	8	-51	4	-216	-81
1966	-1408	-16	-	70	-841	-97	-56	-67	-334	-67
1967	-1379	4	-	58	-779	-96	-52	-54	-391	-69
1968	-1384	-7	-	33	-762	-66	-53	-58	-389	-82
1969	-1289	-41	-	17	-730	17	-54	-49	-369	-81
1970	-1217	21	-	15	-774	-16	-54	-42	-318	-48
1971	-802	-30	612	11	-1002	22	-59	-76	-229	-50
1972	-787	-82	633	4	-1029	126	-58	-78	-256	-46
1973	-842	-87	645	1	-1049	48	-62	-60	-251	-28
1974	-960	-112	968	6	-1242	-64	-69	-93	-319	-34
1975	-1256	-90	1084	9	-1619	-95	-87	-100	-293	-66
1976	-1155	-88	1180	13	-1729	-34	-100	-91	-265	-41
1977	-2869	-160	131	16	-2019	-15	-120	-316	-322	-63
1978	-3234	-155	139	12	-2157	-84	-131	-375	-411	-71

1979	-2795	-120	204	31	-1888	-146	-128	-308	-280	-159
1980	-1714	-67	144	18	-1822	178	-137	-68	83	-43
1981	-2320	-32	81	8	-2003	216	-147	-90	-321	-32
1982	-2498	102	85	23	-2280	235	-165	-120	-302	-76
1983	-2536	214	83	22	-2245	81	-163	-9	-443	-77
1984	-2772	60	73	24	-2055	-61	-169	13	-559	-99
1985	-2908	52	38	23	-2138	-106	-175	36	-551	-88
1986	-2991	145	44	27	-2312	-108	-161	129	-657	-97
1987	-3529	170	33	22	-2618	-195	-153	-53	-645	-90
1988	-3552	38	11	18	-2520	-284	-156	12	-601	-69
1989	-3301	166	13	24	-2457	-157	-157	-53	-617	-63
1990	-3098	128	16	14	-2378	-171	-135	41	-564	-50

Table 2.122 EFFICIENCY IN MONTENEGRO: ALLOCATION EFFECT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-175	-7	-	-15	-83	-0	9	-0	54	-132
1966	-32	11	-	-19	-21	-0	12	-5	79	-89
1967	-87	-3	-	-12	7	-2	6	-4	24	-104
1968	-71	5	-	-0	33	0	7	-7	32	-142
1969	-29	29	-	3	37	-1	8	-7	42	-140
1970	27	-15	-	4	51	-1	7	-9	52	-62
1971	-539	22	-609	4	66	-0	14	-17	47	-65
1972	-511	56	-630	2	84	-3	16	-18	40	-57
1973	-498	53	-642	0	89	-3	12	-13	40	-34
1974	-787	67	-964	3	95	6	17	-19	48	-39
1975	-953	54	-1080	3	71	8	31	-17	44	-68
1976	-1080	54	-1177	4	-2	5	25	-12	56	-35
1977	72	104	-127	2	125	4	37	-125	100	-48
1978	100	105	-135	2	165	26	39	-167	120	-55
1979	-113	81	-201	1	66	27	11	-125	83	-55
1980	-106	46	-142	2	94	-24	-11	-27	-23	-19
1981	70	22	-78	1	131	-12	-32	-35	89	-17
1982	-85	-72	-82	2	156	-14	-67	-42	87	-53
1983	-80	-156	-80	1	169	-6	-55	-3	105	-54

1984	35	-40	-71	2	156	3	-59	4	112	-72
1985	98	-34	-37	2	170	6	-59	12	101	-63
1986	61	-95	-43	2	160	6	-50	40	108	-68
1987	52	-111	-32	2	203	10	-54	-19	110	-57
1988	182	-25	-11	2	198	17	-55	4	99	-48
1989	64	-110	-13	3	191	8	-53	-17	101	-46
1990	98	-88	-15	2	170	5	-45	13	94	-36

Table 2.123 EFFICIENCY IN MONTENEGRO:
TYPES OF ALLOCATION EFFECT

Year	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	3	-	3	1	3	2	3	2	1
1966	2	-	3	1	1	2	1	2	1
1967	3	-	3	2	1	2	1	2	1
1968	2	-	3	2	2	2	1	2	1
1969	2	-	4	2	3	2	1	2	1
1970	3	-	4	2	1	2	1	2	1
1971	2	3	4	2	3	2	1	2	1
1972	2	3	4	2	3	2	1	2	1
1973	2	3	4	2	3	2	1	2	1
1974	2	3	4	2	2	2	1	2	1
1975	2	3	4	2	2	2	1	2	1
1976	2	3	4	1	2	2	1	2	1
1977	2	3	4	2	2	2	1	2	1
1978	2	3	4	2	2	2	1	2	1
1979	2	3	4	2	2	2	1	2	1
1980	2	3	4	2	3	1	1	3	1
1981	2	3	4	2	3	1	1	2	1
1982	3	3	4	2	3	1	1	2	1
1983	3	3	4	2	3	1	1	2	1
1984	3	3	4	2	2	1	4	2	1
1985	3	3	4	2	2	1	4	2	1
1986	3	3	4	2	2	1	4	2	1
1987	3	3	4	2	2	1	1	2	1

1988	3	3	4	2	2	1	4	2	1
1989	3	3	4	2	2	1	1	2	1
1990	3	3	4	2	2	1	4	2	1

GDP of the manufacturing, artisanship, transport and communication and catering and tourism was continuously below hypothetical. In the case of the manufacturing, this was due to both the structural and differential shifts being continuously negative. In the artisanship sector, the effects of the negative differential shift annulled the effects of the positive structural shift throughout the surveyed period. The differential shift in transport and communication was positive in only six years (1965, 1984-1986, 1988 and 1990), but this wasn't enough to prevail over the negative effect of the structural component. In all of the other years, there was a convergent effect of both negative shifts. The efficiency of fixed assets in Montenegro's catering and tourism sector was in all years of the surveyed period smaller than the Yugoslav average. In the first five years (1965-1969) the negative structural shift prevailed over the positive structural shift.

Montenegro's agriculture achieved a real GDP higher than hypothetical in the last nine years (1982-1990). At the same time, the positive differential shift prevailed over the negative effect of the structural component in 1982, 1983 and 1985. It was also positive in 1965, 1967 and 1970, but during this time it was not big enough to prevail over the negative structural shift.

Montenegro's economy did not specialize in agriculture in any of the years of the surveyed period. This sector appeared as comparatively good in ten years (1965, 1967, 1970 and 1982-1988), when it was characterized by the Type 3 allocation effect. In other years, it was Type 2 (*Table 2.123*).

Montenegro's forestry was comparatively good throughout the surveyed period, but the republic did not specialize in it in the first four years, leading to it being characterized by the Type 3 allocation effect. In all other years it was Type 4.

Although it was comparatively bad during the entire period, the manufacturing was specialized in during three years (1965, 1966 and 1976), being Type 1, while in other years it was marked as a Type 2 allocation effect sector.

In the years in which construction appeared as comparatively good (1965, 1969, 1971-1973 and 1980-1983), Montenegro's economy did not specialize in it (Type 3 allocation effect), but the republic did specialize in it in three years (1966, 1967 and 1970 – Type 1 allocation effect) out of 15, in which this sector was comparatively bad.

Artisanship did not appear as a comparatively good sector in any of the years of the surveyed period. The value of its fixed assets' share was below average in the Montenegrin economy from 1965 to 1979, when it was characterized by the Type 2 allocation effect. In the 1980-1990 period, Montenegro specialized in this sector, which resulted in it being characterized by the worst type of allocation effect – Type 1.

In 1965 transport and communication was a comparatively good sector but was not specialized in (Type 3 allocation effect). In all of the other years this sector was specialized in, but in only five years (1984-1986, 1988 and 1990) was it also comparatively good (Type 4 allocation effect). This means that in all of the other years this sector was marked by the Type 1 allocation effect.

Trade was a continuously non-specialized and comparatively bad sector (Type 2 allocation effect), while catering and tourism was specialized in and a comparatively bad sector (Type 1 allocation effect).

Croatia

The data presented in *Table 2.124* shows that the Croatian economy achieved its maximal capital-output ratio (0.459) in 1965, and minimal (0.254) in 1990. This indicates a continuous drop in efficiency of fixed assets in this republic.

The average capital-output ratio in the period from 1965 to 1990 was 0.307, which is to say that one dinar of the value of fixed assets generated slightly less than one-third of GDP. As far as the efficiency of fixed assets is concerned, the best sector was trade, whose average value of capital-output ratio was 1.085. Water management, on the other hand, was the worst: its average capital-output ratio was 0.061.

During the surveyed period Croatia's GDP was around hypothetical: the biggest deviation was in 1972 – 2.4%, followed by a further drop in 1989 and 1990 to 4%. In 1965, real GDP was by only 0.5% below hypothetical, from 1966 to 1979 it was continuously above it, while from 1980 to 1990 it was smaller (*Table 2.128*).

Table 2.124 CROATIA: EFFICIENCY OF FIXED ASSETS

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	0,459	0,409	0,072	0,614	0,412	1,665	0,783	0,175	2,890	0,450
1966	0,453	0,447	0,084	0,595	0,405	1,631	0,692	0,178	2,497	0,380
1967	0,440	0,445	0,090	0,574	0,387	1,650	0,654	0,183	2,149	0,294
1968	0,430	0,422	0,081	0,540	0,381	1,608	0,592	0,185	1,919	0,290
1969	0,432	0,381	0,077	0,513	0,379	1,563	0,587	0,189	2,002	0,300
1970	0,436	0,431	0,080	0,510	0,380	1,485	0,580	0,201	1,940	0,244
1971	0,433	0,434	0,078	0,499	0,368	1,573	0,581	0,204	1,878	0,242
1972	0,425	0,416	0,079	0,493	0,367	1,412	0,569	0,203	1,742	0,221
1973	0,406	0,376	0,079	0,481	0,347	1,192	0,549	0,213	1,683	0,207
1974	0,419	0,414	0,093	0,476	0,365	1,167	0,531	0,222	1,618	0,201
1975	0,401	0,320	0,076	0,466	0,349	1,164	0,647	0,213	1,605	0,185

1976	0,385	0,342	0,080	0,443	0,329	1,240	0,674	0,207	1,538	0,162
1977	0,389	0,353	0,083	0,453	0,336	1,144	0,647	0,204	1,471	0,168
1978	0,393	0,340	0,078	0,422	0,336	1,135	0,596	0,211	1,494	0,170
1979	0,390	0,362	0,070	0,406	0,332	1,113	0,513	0,209	1,455	0,175
1980	0,376	0,327	0,065	0,389	0,324	0,997	0,516	0,218	1,327	0,176
1981	0,360	0,329	0,065	0,391	0,321	0,942	0,508	0,197	1,229	0,174
1982	0,337	0,324	0,062	0,411	0,300	0,799	0,525	0,180	1,195	0,171
1983	0,323	0,328	0,063	0,395	0,289	0,736	0,520	0,177	1,131	0,170
1984	0,320	0,346	0,060	0,393	0,291	0,694	0,519	0,175	1,077	0,181
1985	0,319	0,345	0,064	0,385	0,293	0,679	0,526	0,177	1,064	0,193
1986	0,323	0,362	0,063	0,397	0,302	0,625	0,411	0,185	1,089	0,182
1987	0,310	0,329	0,062	0,398	0,295	0,550	0,360	0,196	0,993	0,164
1988	0,300	0,318	0,060	0,388	0,286	0,515	0,346	0,196	0,919	0,174
1989	0,287	0,321	0,057	0,367	0,280	0,485	0,343	0,182	0,891	0,119
1990	0,254	0,306	0,052	0,314	0,245	0,417	0,244	0,169	0,785	0,107

Table 2.125 EFFICIENCY IN CROATIA: HYPOTHETICAL GDP

1972 prices

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	34059	1141	477	568	16351	1044	373	11285	1140	1679
1966	35842	1304	508	587	17261	1096	386	11286	1378	2036
1967	36560	1356	489	576	17356	1124	403	11199	1629	2427
1968	38798	1547	588	589	18250	1202	462	11516	1851	2793
1969	42060	1795	652	627	19847	1336	503	12210	1997	3093
1970	45306	1842	732	654	21236	1544	532	12408	2274	4083
1971	49633	2132	863	675	23562	1589	554	13168	2615	4475
1972	51943	2204	854	683	24671	1716	592	13295	2937	4992
1973	53782	2460	854	694	25829	1808	626	13174	3049	5288
1974	58306	2701	886	750	27911	1966	706	14222	3522	5642
1975	61134	2828	870	761	29892	2161	755	14337	3492	6039
1976	63324	2946	930	754	31239	2152	729	14440	3543	6591
1977	68523	3127	963	808	33769	2576	815	15635	4027	6804
1978	74370	3428	1025	866	36714	2924	963	16790	4432	7227
1979	79211	3532	1034	936	39589	3287	1120	17564	4675	7474

1980	81887	3576	944	923	40296	3454	1187	19045	4961	7500
1981	82722	3638	921	922	40331	3428	1184	19842	4990	7466
1982	82591	3702	927	911	40147	3431	1178	19915	4949	7431
1983	80682	3691	883	916	39051	3251	1137	19635	4813	7304
1984	84095	3948	937	964	40856	3302	1169	20589	4952	7378
1985	84916	3897	944	969	41251	3254	1200	21024	4936	7442
1986	86685	4021	978	957	42116	3377	1215	21533	4990	7498
1987	86835	4068	986	962	42251	3382	1200	21344	4989	7654
1988	85203	4055	965	963	41170	3355	1174	21124	4934	7461
1989	85176	4102	953	974	40979	3390	1165	21224	4960	7427
1990	76692	3715	869	879	36661	3068	1041	19255	4482	6722

Table 2.126 EFFICIENCY IN CROATIA: STRUCTURAL SHIFT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-1810	-134	-349	243	-3164	2669	359	-6844	4616	793
1966	-948	-41	-365	246	-3588	2746	335	-6755	5837	636
1967	-894	-65	-349	201	-3955	2943	337	-6340	6053	280
1968	-1072	-163	-435	152	-4085	3066	356	-6315	6169	183
1969	-1530	-263	-485	111	-4441	3218	388	-6570	6392	120
1970	-1836	-442	-562	122	-4579	3612	422	-6467	6695	-638
1971	-2305	-266	-656	120	-5115	3209	413	-6758	7719	-971
1972	-2459	-355	-655	100	-4890	3173	456	-6858	8015	-1444
1973	-2093	-313	-647	85	-4903	2859	461	-6592	8623	-1664
1974	-1685	-300	-669	45	-4910	3032	444	-7075	9719	-1971
1975	-1928	-537	-678	41	-5149	3672	554	-7278	9547	-2100
1976	-2741	-382	-710	33	-5444	3727	549	-7237	9188	-2466
1977	-1802	-375	-719	49	-5735	4553	520	-8076	10463	-2482
1978	-1466	-617	-778	-21	-6524	5402	530	-8522	11712	-2648
1979	-1278	-566	-789	-43	-7172	6299	443	-9001	12155	-2603
1980	-1148	-558	-713	-72	-6840	6400	459	-9729	12537	-2632
1981	-1657	-501	-682	-32	-5861	5796	458	-10232	11947	-2550
1982	-1804	-124	-681	9	-5778	5100	495	-10495	12081	-2411
1983	-1845	-86	-637	5	-4940	3883	492	-10111	11749	-2200
1984	-2258	116	-686	15	-4248	3442	473	-10538	11365	-2196

1985	-2456	-107	-692	2	-3738	3129	488	-10636	11267	-2170
1986	-2543	98	-741	-15	-3488	3047	275	-10720	11602	-2601
1987	-2638	64	-738	-24	-2856	2943	151	-10117	10908	-2969
1988	-2449	96	-719	-13	-2380	2458	162	-9774	10387	-2666
1989	-2939	419	-645	-87	-1834	1971	113	-8740	9337	-3096
1990	-2563	419	-645	-87	-1834	1971	113	-8740	9337	-3096

Table 2.127 EFFICIENCY IN CROATIA: DIFFERENTIAL SHIFT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	1649	5	-54	-55	1413	55	-98	-171	1388	-834
1966	1053	27	-49	-60	1799	112	-130	-85	402	-962
1967	1446	101	-38	-13	2116	215	-132	-138	397	-1061
1968	1415	148	-42	7	2149	270	-176	-194	324	-1071
1969	1962	65	-49	13	2148	324	-201	-241	947	-1045
1970	2897	464	-33	7	2276	224	-230	-83	1378	-1106
1971	3470	319	-47	1	2025	1110	-206	-50	1268	-949
1972	3754	366	-36	30	2057	960	-234	88	1403	-880
1973	2708	161	-37	53	1420	703	-231	420	1115	-894
1974	2918	329	-17	75	1858	597	-236	553	662	-903
1975	2548	-12	-25	91	1484	497	-78	642	1068	-1119
1976	3485	87	-26	91	1262	1135	13	651	1595	-1324
1977	2990	140	-35	102	1661	586	46	799	1014	-1322
1978	2854	208	-39	102	1788	268	-7	923	1006	-1394
1979	2214	347	-58	92	1681	-94	-72	977	818	-1476
1980	1024	89	-68	102	1253	-705	-18	1734	-8	-1355
1981	1495	188	-73	110	1474	-258	27	1264	82	-1318
1982	24	-87	-80	168	618	-560	124	1018	159	-1336
1983	580	89	-75	183	268	168	175	1050	43	-1320
1984	-242	85	-80	170	-475	207	198	912	-127	-1131
1985	230	312	-68	168	-670	359	237	963	-175	-896
1986	722	290	-49	208	-92	-22	23	1252	-118	-770
1987	432	72	-55	266	-196	-479	5	1887	-332	-736
1988	1330	82	-57	277	-150	-134	-3	2276	-425	-535
1989	-304	133	-55	279	-666	-214	-9	1627	-469	-930
1990.	-378	169	-52	255	-812	-188	-191	1817	-482	-894

Table 2.128 EFFICIENCY IN CROATIA:
RATIO OF HYPOTHETICAL AND REAL GDP

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	100.5	112.7	644.0	75.2	112.0	27.7	58.9	264.2	16.0	102.5
1966	99.7	101.1	535.1	75.9	111.6	27.7	65.3	253.9	18.1	119.1
1967	98.5	97.4	479.6	75.5	111.9	26.3	66.3	237.2	20.2	147.4
1968	99.1	101.0	525.4	78.8	111.9	26.5	71.9	230.0	22.2	146.7
1969	99.0	112.4	556.9	83.5	113.1	27.4	72.9	226.2	21.4	142.6
1970	97.7	98.8	534.4	83.5	112.2	28.7	73.5	211.8	22.0	174.5
1971	97.7	97.6	539.2	84.8	115.1	26.9	72.8	207.0	22.5	175.2
1972	97.6	99.5	523.7	84.0	113.0	29.3	72.7	203.8	23.8	187.1
1973	98.9	106.6	505.2	83.4	115.6	33.7	73.1	188.2	23.8	193.7
1974	97.9	98.9	443.0	86.2	112.3	35.1	77.2	184.7	25.3	203.8
1975	99.0	124.1	520.7	85.2	114.0	34.1	61.4	186.2	24.8	214.2
1976	98.8	111.1	477.1	85.9	115.5	30.7	56.4	183.8	24.7	235.3
1977	98.3	108.1	462.8	84.3	113.7	33.4	59.0	187.1	26.0	226.8
1978	98.2	113.5	492.7	91.5	114.8	34.0	64.8	182.7	25.8	226.9
1979	98.8	106.6	552.9	95.1	116.1	34.6	75.1	184.1	26.5	220.2
1980	100.2	115.1	579.1	96.9	116.1	37.8	72.9	172.4	28.4	213.5
1981	100.2	109.4	554.7	92.1	112.2	38.2	70.9	182.5	29.3	207.5
1982	102.2	106.0	558.5	83.7	114.7	43.0	65.6	190.8	28.8	201.7
1983	101.6	99.9	516.6	82.9	113.6	44.5	63.0	185.7	29.0	193.0
1984	103.1	95.2	548.0	83.9	113.1	47.5	63.5	187.8	30.6	182.1
1985	102.7	95.0	510.5	85.1	112.0	48.3	62.3	185.2	30.8	170.1
1986	102.1	91.2	520.2	83.2	109.3	52.7	80.3	178.5	30.3	181.7
1987	102.6	96.8	513.3	79.9	107.8	57.9	88.5	162.8	32.1	193.8
1988	101.3	95.8	508.1	78.5	106.5	59.1	88.1	155.0	33.1	175.1
1989	104.0	92.8	526.7	81.1	106.5	61.4	86.9	163.5	33.4	250.0
1990	104.0	86.3	505.4	84.0	107.8	63.2	108.1	156.1	33.6	246.0

Table 2.129 EFFICIENCY IN CROATIA:
RATIO OF STRUCTURAL SHIFT AND REAL GDP

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-5.3	-13.2	-471.2	32.1	-21.7	70.8	56.6	-160.2	64.6	48.4
1966	-2.6	-3.2	-383.7	31.8	-23.2	69.4	56.8	-152.0	76.6	37.2
1967	-2.4	-4.7	-342.0	26.3	-25.5	68.7	55.4	-134.3	74.9	17.0
1968	-2.7	-10.7	-388.1	20.3	-25.0	67.6	55.4	-126.1	73.9	9.6
1969	-3.6	-16.5	-414.9	14.8	-25.3	66.0	56.3	-121.7	68.5	5.5
1970	-4.0	-23.7	-410.3	15.5	-24.2	67.1	58.3	-110.4	64.7	-27.2
1971	-4.5	-12.2	-409.9	15.0	-25.0	54.3	54.3	-106.3	66.5	-38.0
1972	-4.6	-16.0	-401.7	12.2	-22.4	54.2	56.1	-105.1	64.9	-54.1
1973	-3.8	-13.6	-383.1	10.2	-21.9	53.2	53.9	-94.2	67.4	-61.0
1974	-2.8	-11.0	-334.3	5.1	-19.8	54.2	48.6	-91.9	69.9	-71.2
1975	-3.1	-23.6	-406.0	4.5	-19.6	58.0	45.0	-94.5	67.7	-74.5
1976	-4.3	-14.4	-364.0	3.8	-20.1	53.1	42.5	-92.1	64.1	-88.0
1977	-2.6	-13.0	-345.9	5.1	-19.3	59.0	37.7	-96.6	67.5	-82.7
1978	-1.9	-20.4	-374.1	-2.2	-20.4	62.9	35.7	-92.7	68.3	-83.1
1979	-1.6	-17.1	-422.1	-4.4	-21.0	66.4	29.7	-94.3	68.9	-76.7
1980	-1.4	-17.9	-437.5	-7.6	-19.7	69.9	28.2	-88.0	71.7	-74.9
1981	-2.0	-15.1	-410.8	-3.2	-16.3	64.6	27.4	-94.1	70.2	-70.9
1982	-2.2	-3.6	-410.2	0.9	-16.5	64.0	27.5	-100.5	70.3	-65.4
1983	-2.3	-2.3	-372.5	0.5	-14.4	53.2	27.3	-95.6	70.8	-58.1
1984	-2.8	2.8	-401.5	1.3	-11.8	49.5	25.7	-96.1	70.2	-54.2
1985	-3.0	-2.6	-373.8	0.2	-10.1	46.4	25.4	-93.7	70.3	-49.6
1986	-3.0	2.2	-394.1	-1.3	-9.1	47.6	18.2	-88.9	70.4	-63.0
1987	-3.1	1.5	-384.5	-2.0	-7.3	50.4	11.1	-77.2	70.1	-75.2
1988	-2.9	2.3	-378.3	-1.1	-6.2	43.3	12.2	-71.7	69.7	-62.6
1989	-3.6	4.2	-396.4	-4.3	-4.8	42.4	13.7	-76.0	69.7	-118.7
1990	-3.5	9.7	-375.3	-8.3	-5.4	40.6	11.7	-70.9	70.0	-113.3

Table 2.130 EFFICIENCY IN CROATIA:
RATIO OF DIFFERENTIAL SHIFT AND REAL GDP

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	4.9	0.5	-72.8	-7.3	9.7	1.5	-15.5	-4.0	19.4	-50.9
1966	2.9	2.1	-51.5	-7.7	11.6	2.8	-22.1	-1.9	5.3	-56.3
1967	3.9	7.3	-37.6	-1.8	13.6	5.0	-21.7	-2.9	4.9	-64.4
1968	3.6	9.7	-37.2	0.9	13.2	5.9	-27.3	-3.9	3.9	-56.3
1969	4.6	4.1	-42.0	1.8	12.2	6.6	-29.2	-4.5	10.1	-48.2
1970	6.2	24.9	-24.1	0.9	12.0	4.2	-31.8	-1.4	13.3	-47.2
1971	6.8	14.6	-29.3	0.2	9.9	18.8	-27.1	-0.8	10.9	-37.2
1972	7.1	16.5	-22.0	3.7	9.4	16.4	-28.8	1.4	11.4	-33.0
1973	5.0	7.0	-22.2	6.4	6.4	13.1	-27.0	6.0	8.7	-32.8
1974	4.9	12.1	-8.7	8.7	7.5	10.7	-25.8	7.2	4.8	-32.6
1975	4.1	-0.5	-14.7	10.2	5.7	7.8	-6.4	8.3	7.6	-39.7
1976	5.4	3.3	-13.1	10.3	4.7	16.2	1.0	8.3	11.1	-47.2
1977	4.3	4.8	-16.9	10.6	5.6	7.6	3.3	9.6	6.5	-44.1
1978	3.8	6.9	-18.6	10.7	5.6	3.1	-0.5	10.0	5.9	-43.8
1979	2.8	10.5	-30.8	9.3	4.9	-1.0	-4.9	10.2	4.6	-43.5
1980	1.3	2.9	-41.5	10.7	3.6	-7.7	-1.1	15.7	-0.0	-38.6
1981	1.8	5.6	-43.9	11.0	4.1	-2.9	1.6	11.6	0.5	-36.6
1982	0.0	-2.5	-48.3	15.4	1.8	-7.0	6.9	9.8	0.9	-36.3
1983	0.7	2.4	-44.0	16.6	0.8	2.3	9.7	9.9	0.3	-34.9
1984	-0.3	2.0	-46.5	14.8	-1.3	3.0	10.8	8.3	-0.8	-27.9
1985	0.3	7.6	-36.7	14.7	-1.8	5.3	12.3	8.5	-1.1	-20.5
1986	0.9	6.6	-26.1	18.1	-0.2	-0.3	1.5	10.4	-0.7	-18.7
1987	0.5	1.7	-28.8	22.1	-0.5	-8.2	0.4	14.4	-2.1	-18.6
1988	1.6	1.9	-29.8	22.6	-0.4	-2.4	-0.3	16.7	-2.9	-12.6
1989	-0.4	3.0	-30.3	23.2	-1.7	-3.9	-0.6	12.5	-3.2	-31.3
1990	-0.5	3.9	-30.1	24.3	-2.4	-3.9	-19.8	14.7	-3.6	32.7

In all of the surveyed years the structural shift was negative, while the differential was positive, with the exception of 1984 and the last two years, in which it was negative (*Tables 2.129 and 2.130*).

Forestry, construction and artisanship (with the exception of 1990), as well as trade (throughout the analyzed period), had a real GDP higher than hypothetical during the entire period. In forestry, this was achieved owing either to the preva-

lent effect of the positive shift, either structural or differential, or the cumulative effect of both positive shifts. In all of the years, the structural shift in construction was positive, while in the years when the differential shift was negative (1979-1982 and 1986-1990), it was still sufficiently big to annul the negative effect of the latter. Croatia's artisanship sector had an efficiency of fixed assets lower than the Yugoslav average in 17 years (1965-1975, 1978-1981 and 1988-1990), and trade during eight years (1980 and 1984-1990).

Water management, transport and communication and catering and tourism, on the other hand, throughout the entire period had a real GDP lower than hypothetical. In the case of water management this was the consequence of a continuously negative structural as well as differential shift. The negative effect of the structural component in the case of the manufacturing and transport and communication prevailed in the years when these sectors (from 1965 to 1983 in the manufacturing, and from 1972 to 1990 in transport and communication) had a positive differential shift. The catering and tourism's differential shift was negative throughout the surveyed period, while from 1970 to 1990 it worked together with the negative structural shift.

Table 2.131 EFFICIENCY IN CROATIA: NET DIFFERENTIAL SHIFT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	2657	9	-48	-44	1623	59	-89	-133	1713	-434
1966	1878	44	-47	-47	2059	121	-120	-68	422	-485
1967	2488	165	-40	-11	2460	231	-116	-108	411	-504
1968	2523	225	-40	6	2513	299	-149	-152	340	-519
1969	3112	96	-51	12	2507	363	-164	-186	1048	-511
1970	4361	699	-32	6	2652	241	-185	-66	1577	-531
1971	4765	439	-45	1	2344	1300	-175	-40	1413	-473
1972	4971	499	-36	26	2367	1118	-195	72	1562	-441
1973	3567	202	-38	47	1617	825	-194	357	1198	-448
1974	3747	407	-19	68	2120	694	-198	472	668	-466
1975	3326	-14	-28	84	1679	561	-69	558	1112	-557
1976	4578	105	-28	84	1421	1344	13	566	1721	-648
1977	3846	169	-40	94	1876	627	44	701	1033	-658
1978	3724	245	-43	94	2030	276	-7	811	1011	-693
1979	3134	406	-66	82	1911	-92	-66	855	831	-727
1980	1641	104	-84	93	1447	-675	-16	1459	-8	-679
1981	2187	217	-90	100	1720	-250	25	1040	82	-658

1982	586	-97	-97	157	724	-539	118	832	159	-672
1983	1064	98	-91	169	316	163	170	849	43	-653
1984	40	94	-94	155	-558	206	197	737	-127	-571
1985	394	346	-80	155	-786	372	236	778	-175	-452
1986	851	320	-62	196	-108	-22	23	1008	-117	-386
1987	386	79	-70	253	-229	-492	5	1532	-327	-366
1988	1112	88	-71	261	-177	-136	-4	1832	-415	-266
1989	-283	144	-69	262	-786	-216	-9	1314	-458	-465
1990	-431	183	-64	239	-959	-190	-195	1473	-471	-448

Table 2.132 EFFICIENCY IN CROATIA: ALLOCATION EFFECT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-1007	-4	-6	-11	-211	-4	-9	-38	-325	-400
1966	-825	-17	-2	-13	-260	-9	-10	-17	-20	-477
1967	-1042	-64	2	-2	-344	-16	-16	-30	-14	-557
1968	-1108	-77	-2	1	-363	-30	-27	-42	-16	-553
1969	-1150	-30	2	2	-359	-39	-37	-55	-101	-533
1970	-1463	-235	-1	1	-376	-17	-45	-17	-199	-575
1971	-1294	-120	-2	0	-319	-191	-31	-10	-145	-477
1972	-1217	-132	0	4	-310	-158	-39	16	-159	-439
1973	-859	-41	1	6	-197	-122	-37	62	-83	-447
1974	-829	-78	1	7	-261	-97	-38	80	-6	-437
1975	-778	2	3	7	-195	-64	-10	84	-45	-562
1976	-1093	-19	2	7	-159	-208	1	85	-126	-675
1977	-856	-29	5	8	-215	-40	2	98	-19	-664
1978	-870	-37	5	8	-242	-8	-1	112	-6	-701
1979	-920	-59	8	10	-230	-2	-6	121	-14	-749
1980	-617	-16	17	9	-195	-29	-2	274	-0	-676
1981	-692	-30	17	10	-246	-8	2	224	-0	-661
1982	-562	11	17	11	-106	-21	6	186	-1	-664
1983	-485	-9	16	14	-49	5	4	201	0	-667
1984	-281	-9	14	14	83	1	1	175	0	-561
1985	-164	-34	12	13	116	-13	0	186	-0	-444
1986	-129	-29	13	12	16	0	-0	244	-1	-384

1987	47	-6	15	13	34	13	-0	354	-5	-370
1988	219	-7	15	16	27	2	0	444	-10	-269
1989	-21	-11	14	16	120	3	0	313	-12	-465
1990	53	-14	12	16	146	2	4	344	-11	-447

Table 2.133 EFFICIENCY IN CROATIA: TYPES OF ALLOCATION EFFECT

Year	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	3	1	1	3	3	1	1	3	1
1966	3	1	1	3	3	1	1	3	1
1967	3	2	1	3	3	1	1	3	1
1968	3	1	4	3	3	1	1	3	1
1969.	3	2	4	3	3	1	1	3	1
1970	3	1	4	3	3	1	1	3	1
1971	3	1	4	3	3	1	1	3	1
1972	3	2	4	3	3	1	4	3	1
1973	3	2	4	3	3	1	4	3	1
1974	3	2	4	3	3	1	4	3	1
1975	2	2	4	3	3	1	4	3	1
1976	3	2	4	3	3	4	4	3	1
1977	3	2	4	3	3	4	4	3	1
1978	3	2	4	3	3	1	4	3	1
1979	3	2	4	3	1	1	4	3	1
1980	3	2	4	3	1	1	4	1	1
1981	3	2	4	3	1	4	4	3	1
1982	2	2	4	3	1	4	4	3	1
1983	3	2	4	3	4	4	4	4	1
1984	3	2	4	2	4	4	4	2	1
1985	3	2	4	2	3	4	4	1	1
1986	3	2	4	2	2	3	4	1	1
1987	3	2	4	2	2	3	4	1	1
1988	3	2	4	2	2	2	4	1	1
1989	3	2	4	2	2	2	4	1	1
1990	3	2	4	2	2	2	4	1	1

In 1967, 1970-1972, 1974, 1983 and 1985 the positive effect of the differential shift prevailed over the negative structural shift, making the agriculture's real GDP higher than hypothetical. In five other years (1984, 1986-1990), when it was also higher, it was the result of the convergent effect of the positive value of both shifts. In the other years agriculture's real GDP was below hypothetical, primarily owing to the negative influence of the structural component.

Croatia's economy was not specialized in the manufacturing and agriculture in any of the years of the surveyed period. During two years (1975 and 1982) agriculture was a comparatively inferior sector (Type 2 allocation effect), while in the remaining years it was comparatively good (Type 3 allocation effect). The manufacturing was also for long marked by the Type 3 allocation effect, only to "advance" to Type 2 in the last years (1983-1990) of the surveyed period (*Table 2.133*).

Contrary to the above, Croatia's economy specialized in forestry, transport and communication and catering and tourism in the entire analyzed period, although these sectors in certain years (forestry from 1986 to 1990, transport and communication from 1972 to 1990) appeared as comparatively good (Type 4 allocation effect), while in some (forestry from 1965 to 1967, transport and communication from 1965 to 1971, catering and tourism in all of the years) as comparatively bad making them Type 1.

Throughout the surveyed period water management was a comparatively bad sector, which Croatia specialized in in 1965, 1966, 1968, 1970 and 1971 (Type 1 allocation effect), whereas in all of the other years it was an unspecialized sector (Type 2 allocation effect).

For a long time (1965-1978, and in 1985) Croatia did not specialize in construction although this sector in the same period had comparative advantages (Type 3 allocation effect). This sector appeared as non-specialized in also the last five years (1986-1990), when it was comparatively inferior (Type 2 allocation effect). Croatia specialized in construction from 1979 to 1984, with this sector being comparatively bad in the first four years of this period (Type 1 allocation effect), and comparatively good in the last two years (Type 4 allocation effect).

From 1965 to 1985 Croatia specialized in artisanship, although this sector was comparatively good in only seven years (1976-1977, and 1981-1988 –Type 4 allocation effect), while in all others it was comparatively bad (Type 1 allocation effect). In 1986 and 1987 the artisanship sector appeared as comparatively good and non-specialized in (Type 3 allocation effect), being from 1988 to 1990 comparatively bad and non-specialized in (Type 2 allocation effect).

In only eight years (1980, 1983, and 1985-1990) Croatia specialized in trade, with this sector being comparatively good only in 1983 (Type 4 allocation effect). For five years it was comparatively bad (Type 1 allocation effect). In all of the other years it was marked by the Type 3 allocation effect.

Macedonia

Table 2.134 shows capital-output ratio trends in the Macedonian economy's social sector. The data confirms a downward trend: the maximum efficiency of fixed assets was achieved in 1965, and the minimum in 1990. In the first year of the surveyed period one dinar of fixed assets accounted for 0.451 dinars of GDP, while in the last surveyed year the amount was almost halved (0.263).

Table 2.134 MACEDONIA: EFFICIENCY OF FIXED ASSETS

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	0,451	0,351	0,102	1,086	0,362	1,638	1,029	0,141	2,607	0,574
1966	0,443	0,376	0,103	1,132	0,344	1,340	0,945	0,155	2,711	0,401
1967	0,421	0,352	0,095	0,936	0,318	1,250	0,975	0,167	2,517	0,380
1968	0,410	0,282	0,072	0,840	0,321	1,160	0,909	0,169	2,418	0,421
1969	0,421	0,325	0,084	0,935	0,327	1,240	0,947	0,177	2,103	0,375
1970	0,425	0,321	0,085	0,972	0,345	1,153	0,865	0,174	2,019	0,314
1971	0,429	0,342	0,088	0,835	0,341	1,132	0,792	0,193	1,956	0,304
1972	0,417	0,318	0,082	0,781	0,337	1,129	0,684	0,188	1,841	0,283
1973	0,394	0,323	0,087	0,547	0,328	0,909	0,673	0,180	1,704	0,261
1974	0,386	0,302	0,077	0,532	0,331	0,827	0,664	0,186	1,578	0,258
1975	0,366	0,308	0,081	0,509	0,309	0,837	0,718	0,177	1,344	0,227
1976	0,360	0,324	0,082	0,488	0,305	0,951	0,660	0,171	1,237	0,206
1977	0,356	0,253	0,066	0,522	0,309	0,901	0,683	0,172	1,275	0,214
1978	0,361	0,253	0,064	0,481	0,314	0,865	0,664	0,178	1,253	0,220
1979	0,366	0,254	0,065	0,520	0,322	0,845	0,605	0,173	1,182	0,211
1980	0,358	0,253	0,082	0,493	0,326	0,810	0,535	0,153	1,079	0,208
1981	0,343	0,237	0,081	0,470	0,320	0,699	0,527	0,134	1,041	0,207
1982	0,340	0,273	0,078	0,585	0,319	0,624	0,465	0,124	1,043	0,203
1983	0,322	0,231	0,079	0,547	0,310	0,538	0,448	0,120	0,982	0,184
1984	0,328	0,245	0,077	0,665	0,330	0,482	0,444	0,123	0,920	0,187
1985	0,319	0,201	0,089	0,660	0,334	0,418	0,467	0,120	0,866	0,172
1986	0,326	0,245	0,092	0,627	0,340	0,409	0,459	0,123	0,882	0,162
1987	0,317	0,218	0,095	0,562	0,342	0,353	0,368	0,138	0,780	0,150
1988	0,298	0,201	0,093	0,551	0,325	0,313	0,416	0,124	0,732	0,140
1989	0,297	0,199	0,086	0,549	0,332	0,297	0,398	0,126	0,689	0,121
1990	0,263	0,177	0,082	0,475	0,302	0,260	0,370	0,104	0,544	0,114

Table 2.135 EFFICIENCY IN MACEDONIA: HYPOTHETICAL GDP

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	6530	606	167	43	3461	256	43	1582	252	119
1966	7091	681	197	41	3742	346	46	1617	261	160
1967	7432	733	220	47	4001	357	45	1585	286	159
1968	7930	795	247	51	4294	387	50	1633	307	166
1969	8676	911	281	46	4680	404	51	1706	396	202
1970	9410	991	303	46	4988	452	58	1875	451	246
1971	10080	1065	332	54	5456	476	69	1862	510	257
1972	10708	1105	345	57	5818	466	84	1965	565	303
1973	11657	1162	345	81	6384	512	88	2145	613	327
1974	13139	1317	408	89	7249	560	98	2324	719	376
1975	13939	1360	411	93	7736	602	106	2375	829	427
1976	14405	1432	456	91	7976	578	116	2391	866	499
1977	15860	1584	491	94	8918	670	121	2549	918	517
1978	17307	1702	514	101	9781	757	136	2735	1041	540
1979	18475	1826	529	105	10328	863	170	2849	1212	594
1980	18737	1870	526	106	10420	877	170	2894	1262	613
1981	18896	1900	509	115	10494	915	174	2902	1283	604
1982	18431	1816	491	97	10272	894	172	2859	1238	592
1983	18444	1770	471	98	10439	873	170	2813	1222	589
1984	18713	1814	481	95	10541	891	174	2875	1245	598
1985	18927	1832	481	92	10686	889	170	2921	1249	607
1986	19760	1875	490	99	11297	928	173	3026	1259	612
1987	19494	1836	481	104	11184	913	167	2981	1227	602
1988	19186	1801	469	104	11030	884	161	2957	1198	581
1989	19064	1785	465	104	10898	894	161	2997	1189	572
1990	17097	1600	413	97	9754	800	143	2709	1068	513

Table 2.136 EFFICIENCY IN MACEDONIA: STRUCTURAL SHIFT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-31	-71	-122	18	-670	654	41	-960	1021	56
1966	171	-21	-141	17	-778	866	40	-968	1106	50
1967	68	-35	-157	16	-912	933	38	-897	1062	18
1968	-48	-84	-182	13	-961	989	38	-896	1024	11
1969	-13	-134	-209	8	-1047	973	39	-918	1266	8
1970	-120	-238	-232	8	-1076	1058	46	-977	1328	-38
1971	-54	-133	-252	10	-1184	960	51	-955	1505	-56
1972	-219	-178	-265	8	-1153	862	65	-1013	1543	-88
1973	-179	-148	-261	10	-1212	809	65	-1074	1735	-103
1974	-102	-146	-308	5	-1275	864	62	-1156	1984	-131
1975	107	-258	-320	5	-1332	1023	78	-1206	2266	-149
1976	31	-185	-348	4	-1390	1000	88	-1198	2247	-187
1977	75	-190	-367	6	-1515	1185	77	-1317	2384	-189
1978	202	-306	-390	-2	-1738	1398	75	-1388	2752	-198
1979	631	-293	-404	-5	-1871	1653	67	-1460	3150	-207
1980	719	-291	-397	-8	-1769	1624	66	-1478	3189	-215
1981	815	-262	-377	-4	-1525	1546	67	-1497	3072	-206
1982	825	-61	-361	1	-1478	1329	72	-1507	3022	-192
1983	772	-41	-340	1	-1321	1043	73	-1448	2982	-177
1984	814	53	-353	1	-1096	928	70	-1471	2858	-178
1985	748	-50	-352	0	-968	854	69	-1478	2850	-177
1986	821	46	-371	-2	-936	838	39	-1507	2926	-212
1987	762	29	-360	-3	-756	794	21	-1413	2683	-234
1988	670	42	-349	-1	-638	648	22	-1368	2522	-208
1989	694	80	-350	-6	-488	617	25	-1393	2480	-272
1990	666	180	-307	-10	-488	514	15	-1230	2225	-236

Table 2.137 EFFICIENCY IN MACEDONIA: DIFFERENTIAL SHIFT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-118	-73	-8	40	-73	-1	12	-139	152	-27
1966	-313	-93	-11	45	-115	-187	10	-93	200	-68
1967	-279	-101	-15	38	-156	-261	19	-77	313	-38
1968	-253	-185	-23	36	-93	-321	18	-88	414	-13
1969	-134	-85	-17	46	-60	-207	22	-81	281	-33
1970	84	-7	-10	50	126	-287	14	-132	357	-26
1971	201	-72	-11	43	127	-164	9	-55	341	-17
1972	285	-78	-12	42	62	-57	-10	-58	404	-9
1973	-44	-78	-8	20	53	-162	-5	-108	257	-12
1974	-678	-199	-23	21	-127	-294	-1	-112	64	-8
1975	-1213	-49	-6	21	-394	-356	8	-113	-289	-34
1976	-784	-25	-10	22	-180	-134	-2	-115	-296	-42
1977	-1174	-345	-39	29	-199	-273	18	-86	-239	-39
1978	-1345	-281	-39	27	-81	-460	23	-86	-414	-35
1979	-1564	-328	-36	42	172	-625	29	-109	-647	-61
1980	-1655	-320	-14	41	376	-613	6	-238	-832	-60
1981	-1704	-389	-18	39	364	-687	13	-330	-646	-51
1982	-1033	-316	-19	67	725	-601	-12	-322	-506	-50
1983	-1121	-480	-18	65	765	-484	-11	-333	-544	-82
1984	-891	-518	-16	95	1111	-515	-10	-330	-627	-81
1985	-1258	-660	2	93	1188	-608	3	-369	-797	-111
1986	-1030	-531	18	91	1287	-615	29	-390	-820	-100
1987	-876	-609	22	82	1582	-694	5	-277	-904	-85
1988	-1084	-653	24	86	1378	-622	37	-388	-839	-107
1989	-746	-674	19	93	1726	-619	29	-335	-918	-67
1990	-734	-708	23	87	1904	-524	42	-408	-1093	-56

Table 2.138 EFFICIENCY IN MACEDONIA:
RATIO OF HYPOTHETICAL AND REAL GDP

In %

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	102.3	131.3	451.3	42.5	127.3	28.2	44.8	326.9	17.7	80.4
1966	102.0	120.3	437.8	39.9	131.3	33.7	47.8	290.9	16.7	112.7
1967	102.9	123.0	457.7	46.3	136.4	34.7	44.4	259.4	17.2	113.9
1968	103.9	151.2	588.0	50.7	132.5	36.7	46.9	251.5	17.6	101.1
1969	101.7	131.6	510.6	45.8	131.0	34.5	45.2	241.4	20.4	114.3
1970	100.4	132.8	504.5	43.9	123.5	37.0	49.3	244.7	21.1	135.8
1971	98.6	123.8	480.8	50.7	124.0	37.4	53.4	218.8	21.6	139.3
1972	99.4	130.1	508.0	53.0	123.1	36.7	60.6	219.9	22.5	146.5
1973	101.9	124.2	459.5	73.4	122.2	44.1	59.7	222.6	23.5	154.0
1974	106.3	135.6	529.3	77.1	124.0	49.6	61.7	220.0	26.0	159.1
1975	108.6	129.1	489.0	78.1	128.7	47.4	55.4	224.8	29.5	174.8
1976	105.5	117.3	465.8	78.0	124.5	40.0	57.6	221.9	30.8	184.3
1977	107.4	151.0	577.5	73.1	123.8	42.4	55.9	222.3	30.0	178.8
1978	107.1	152.6	604.2	80.3	122.8	44.7	58.2	216.9	30.8	175.9
1979	105.3	151.5	594.7	74.1	119.7	45.6	63.8	222.6	32.6	182.4
1980	105.3	148.6	461.2	76.4	115.4	46.4	70.4	245.8	34.9	181.2
1981	104.9	152.0	446.5	76.7	112.4	51.6	68.4	269.7	34.6	174.0
1982	101.1	126.2	438.8	58.8	107.9	55.1	74.1	277.6	33.0	169.2
1983	101.9	141.7	416.9	59.9	105.6	61.0	73.2	272.8	33.4	178.5
1984	100.4	134.5	425.8	49.5	99.9	68.3	74.2	267.9	35.8	176.3
1985	102.8	163.3	367.3	49.6	98.0	78.3	70.1	272.0	37.8	190.4
1986	101.1	134.9	357.9	52.6	97.0	80.7	71.8	267.8	37.4	203.9
1987	100.6	146.2	336.5	56.6	93.1	90.1	86.6	230.9	40.8	212.0
1988	102.2	151.3	325.8	55.3	93.7	97.2	73.2	246.2	41.6	217.7
1989	100.3	150.0	346.8	54.3	89.8	100.2	74.8	236.2	43.2	245.5
1990	100.4	149.2	320.1	55.5	87.3	101.3	71.4	252.9	48.5	232.0

Table 2.139 EFFICIENCY IN MACEDONIA:
RATIO OF STRUCTURAL SHIFT AND REAL GDP

In %

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-0.5	-15.4	-330.3	18.2	-24.6	72.0	43.1	-198.3	71.6	38.0
1966	2.5	-3.7	-313.9	16.7	-27.3	84.5	41.6	-174.1	70.6	35.2
1967	0.9	-5.9	-326.3	16.1	-31.1	90.7	37.2	-146.8	64.0	13.2
1968	-0.6	-16.0	-434.4	13.1	-29.7	93.7	36.1	-137.9	58.7	6.6
1969	-0.2	-19.3	-380.4	8.1	-29.3	83.1	34.9	-129.9	65.2	4.4
1970	-1.3	-31.9	-387.4	8.2	-26.6	86.5	39.1	-127.6	62.2	-21.2
1971	-0.5	-15.5	-365.5	9.0	-26.9	75.5	39.8	-112.3	63.9	-30.2
1972	-2.0	-21.0	-389.6	7.7	-24.4	67.8	46.7	-113.4	61.4	-42.4
1973	-1.6	-15.8	-348.4	8.9	-23.2	69.8	44.0	-111.4	66.6	-48.5
1974	-0.8	-15.1	-399.4	4.6	-21.8	76.5	38.8	-109.4	71.7	-55.6
1975	0.8	-24.5	-381.3	4.2	-22.2	80.6	40.6	-114.1	80.8	-60.8
1976	0.2	-15.2	-355.3	3.4	-21.7	69.3	43.4	-111.2	79.8	-68.9
1977	0.5	-18.1	-431.6	4.4	-21.0	74.9	35.7	-114.8	77.8	-65.2
1978	1.2	-27.5	-458.8	-1.9	-21.8	82.5	32.0	-110.1	81.4	-64.5
1979	3.6	-24.3	-454.0	-3.4	-21.7	87.4	25.2	-114.1	84.8	-63.5
1980	4.0	-23.2	-348.5	-6.0	-19.6	86.1	27.2	-125.6	88.1	-63.6
1981	4.5	-20.9	-330.7	-2.6	-16.3	87.2	26.4	-139.1	82.8	-59.4
1982	4.5	-4.2	-322.3	0.6	-15.5	81.9	31.1	-146.3	80.5	-54.9
1983	4.3	-3.3	-300.6	0.4	-13.4	72.8	31.7	-140.5	81.5	-53.8
1984	4.4	3.9	-312.0	0.8	-10.4	71.2	30.0	-137.1	82.2	-52.5
1985	4.1	-4.5	-269.0	0.1	-8.9	75.3	28.5	-137.6	86.3	-55.5
1986	4.2	3.3	-271.1	-0.8	-8.0	72.8	16.3	-133.3	87.0	-70.8
1987	3.9	2.3	-252.1	-1.4	-6.3	78.4	10.9	-109.4	89.2	-82.2
1988	3.6	3.6	-242.6	-0.8	-5.4	71.2	10.1	-113.9	87.5	-77.8
1989	3.7	6.7	-261.0	-2.9	-4.0	69.2	11.8	-109.8	90.2	-116.6
1990	3.9	16.8	-237.7	-5.5	-4.4	65.1	7.7	-114.8	101.1	-106.8

Table 2.140 EFFICIENCY IN MACEDONIA:
RATIO OF DIFFERENTIAL SHIFT AND REAL GDP

In %

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-1.9	-15.9	-21.1	39.4	-2.7	-0.1	12.1	-28.7	10.7	-18.4
1966	-4.5	-16.5	-23.9	43.4	-4.0	-18.2	10.6	-16.8	12.7	-47.8
1967	-3.9	-17.0	-31.3	37.6	-5.3	-25.4	18.4	-12.5	18.8	-27.0
1968	-3.3	-35.2	-53.6	36.3	-2.9	-30.4	17.0	-13.6	23.7	-7.7
1969	-1.6	-12.3	-30.2	46.1	-1.7	-17.7	19.9	-11.5	14.5	-18.7
1970	0.9	-0.9	-17.2	48.0	3.1	-23.5	11.6	-17.2	16.7	-14.6
1971	2.0	-8.3	-15.3	40.3	2.9	-12.9	6.7	-6.5	14.5	-9.1
1972	2.6	-9.1	-18.4	39.2	1.3	-4.5	-7.3	-6.5	16.1	-4.1
1973	-0.4	-8.4	-11.1	17.7	1.0	-14.0	-3.6	-11.2	9.9	-5.5
1974	-5.5	-20.5	-29.9	18.4	-2.2	-26.0	-0.5	-10.6	2.3	-3.5
1975	-9.4	-4.6	-7.7	17.7	-6.6	-28.0	4.0	-10.7	-10.3	-14.0
1976	-5.7	-2.1	-10.4	18.5	-2.8	-9.3	-1.1	-10.7	-10.5	-15.3
1977	-8.0	-32.9	-45.9	22.4	-2.8	-17.3	8.4	-7.5	-7.8	-13.6
1978.	-8.3	-25.2	-45.4	21.7	-1.0	-27.1	9.8	-6.8	-12.2	-11.4
1979	-8.9	-27.2	-40.7	29.3	2.0	-33.1	11.0	-8.5	-17.4	-18.9
1980	-9.3	-25.5	-12.7	29.6	4.2	-32.5	2.3	-20.2	-23.0	-17.6
1981	-9.5	-31.1	-15.9	26.0	3.9	-38.7	5.2	-30.6	-17.4	-14.6
1982	-5.7	-22.0	-16.5	40.6	7.6	-37.0	-5.2	-31.3	-13.5	-14.3
1983	-6.2	-38.4	-16.3	39.8	7.7	-33.8	-4.9	-32.3	-14.9	-24.7
1984	-4.8	-38.4	-13.8	49.7	10.5	-39.5	-4.2	-30.8	-18.0	-23.8
1985	-6.8	-58.8	1.7	50.2	10.9	-53.6	1.4	-34.4	-24.1	-34.9
1986	-5.3	-38.2	13.2	48.2	11.0	-53.4	11.9	-34.5	-24.4	-33.2
1987	-4.5	-48.5	15.6	44.8	13.2	-68.5	2.6	-21.4	-30.1	-29.8
1988	-5.8	-54.9	16.8	45.5	11.7	-68.4	16.7	-32.3	-29.1	-39.9
1989	-3.9	-56.7	14.2	48.6	14.2	-69.4	13.4	-26.4	-33.4	-28.9
1990	-4.3	-66.0	17.6	50.0	17.0	-66.4	20.9	-38.1	-49.7	-25.2

From 1965 to 1990 the Macedonian economy's capital-output ratio averaged 0.311 dinars. The fixed assets of trade were the most efficient (capital-output ratio of 0.902), while the least efficient were the fixed assets of water management (a 0.084 capital-output ratio).

Real GDP of the Macedonian economy in the observed period (save for 1971 and 1972) was smaller than hypothetical (*Table 2.138*). This was in the first place the result of the prevalent influence of a negative differential shift. In all of the years (except in 1970, 1971 and 1972) the differential shift was negative. The structural shift was negative in 1965 and from 1968 to 1974 (*Tables 2.139 and 2.140*).

Forestry, construction (except in the last two years), artisanship and trade, were sectors whose GDPs during the entire period were above hypothetical, that is, whose efficiency of fixed assets exceeded the Yugoslav average in the corresponding sectors. Only in forestry was this the result of a continuously above-average efficiency of fixed assets relative to the Yugoslav average. In other words, the influence of the continuously positive differential shift in this sector was predominant even in the years when the structural shift in forestry was negative (1978-1981 and 1986-1990). On the other hand, the continuously positive effect of the structural component in construction prevailed in every year (save for 1989 and 1990) over the negative differential shift. The number of years with a positive differential shift in artisanship (positive during 18 years – 1967-1971, 1975, 1977-1981 and 1985-1990) was bigger than the number of years in which this sector had a below-average efficiency of fixed assets. This, along with the continuously positive structural shift, provided this sector with a GDP higher than hypothetical for the entire time. Throughout the surveyed period trade's positive structural shift worked in unison from 1965 to 1974 with the positive differential shift, whereas from 1975 to 1990 it exceeded the latter's negative effect.

Table 2.141 EFFICIENCY IN MACEDONIA: NET DIFFERENTIAL SHIFT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-50	-44	-4	80	-76	-1	18	-147	163	-38
1966	-164	-58	-5	100	-120	-126	16	-103	219	-86
1967	-68	-62	-7	79	-160	-180	30	-86	375	-56
1968	75	-112	-10	74	-94	-226	29	-100	534	-21
1969	51	-51	-8	112	-61	-158	37	-92	324	-51
1970	288	-4	-5	126	130	-220	21	-144	427	-44
1971	360	-40	-5	92	129	-131	12	-64	396	-29
1972	443	-43	-6	91	62	-50	-12	-66	482	-14
1973	38	-45	-5	32	53	-145	-7	-122	297	-21
1974	-561	-114	-12	36	-125	-271	-1	-132	71	-14
1975	-1185	-28	-4	36	-393	-329	11	-135	-290	-55
1976	-796	-14	-5	38	-181	-135	-3	-137	-297	-61
1977	-1001	-190	-20	53	-197	-260	27	-107	-248	-60

1978	-1171	-155	-20	50	-80	-426	35	-108	-412	-54
1979	-1261	-173	-19	77	175	-543	41	-138	-592	-89
1980	-1365	-165	-7	74	384	-530	8	-302	-744	-84
1981	-1388	-197	-9	65	373	-570	19	-424	-574	-71
1982	-745	-161	-9	131	741	-495	-18	-410	-453	-70
1983	-810	-253	-10	128	773	-399	-17	-430	-488	-114
1984	-493	-276	-8	197	1125	-423	-15	-425	-556	-112
1985	-788	-347	1	202	1199	-514	5	-478	-702	-153
1986	-655	-286	10	189	1284	-514	46	-509	-736	-139
1987	-461	-330	13	163	1572	-593	8	-361	-813	-120
1988	-705	-358	14	169	1366	-542	61	-502	-760	-153
1989	-314	-374	11	184	1713	-532	48	-428	-836	-98
1990	-323	-396	13	166	1882	-453	69	-524	-998	-81

Table 2.142 EFFICIENCY IN MACEDONIA: ALLOCATION EFFECT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-68	-29	-4	-41	3	-0	-6	9	-10	11
1966	-149	-36	-6	-55	5	-61	-5	9	-19	18
1967	-211	-39	-8	-41	4	-81	-11	10	-62	18
1968	-328	-73	-12	-38	1	-95	-11	11	-120	8
1969	-185	-35	-8	-66	1	-49	-15	11	-43	18
1970	-204	-3	-5	-76	-4	-68	-7	12	-71	17
1971	-159	-32	-5	-49	-2	-34	-3	8	-55	13
1972	-158	-34	-6	-49	-0	-7	2	8	-78	6
1973	-82	-33	-4	-13	0	-16	2	14	-41	9
1974	-117	-85	-11	-15	-1	-24	0	20	-7	6
1975	-27	-21	-3	-15	-1	-27	-3	22	0	21
1976	13	-11	-5	-16	1	0	1	22	1	20
1977	-173	-155	-19	-24	-2	-13	-9	21	8	20
1978	-174	-126	-19	-23	-1	-34	-12	22	-2	19
1979	-303	-155	-17	-35	-3	-82	-12	28	-55	27
1980	-290	-156	-7	-33	-8	-83	-3	64	-88	24
1981	-316	-192	-9	-26	-9	-117	-6	94	-72	21
1982	-288	-155	-9	-64	-16	-106	6	87	-52	20

1983	-311	-227	-9	-63	-8	-84	6	97	-56	33
1984	-398	-242	-8	-102	-14	-92	5	95	-71	31
1985	-470	-313	1	-108	-10	-94	-2	109	-95	42
1986	-375	-245	8	-97	3	-101	-17	119	-84	40
1987	-415	-279	9	-80	10	-101	-3	85	-91	35
1988	-379	-295	10	-83	12	-81	-24	114	-79	47
1989	-433	-300	8	-90	13	-87	-19	94	-82	31
1990	-411	-312	10	-79	22	-71	-28	116	-95	26

Table 2.143 EFFICIENCY IN MACEDONIA:
TYPES OF ALLOCATION EFFECT

Year	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	1	1	3	2	1	3	2	3	2
1966	1	1	3	2	1	3	2	3	2
1967	1	1	3	2	1	3	2	3	2
1968	1	1	3	2	1	3	2	3	2
1969	1	1	3	2	1	3	2	3	2
1970	1	1	3	3	1	3	2	3	2
1971	1	1	3	3	1	3	2	3	2
1972	1	1	3	3	1	2	2	3	2
1973	1	1	3	4	1	2	2	3	2
1974	1	1	3	1	1	2	2	3	2
1975	1	1	3	1	1	3	2	2	2
1976	1	1	3	2	2	2	2	2	2
1977	1	1	3	1	1	3	2	2	2
1978	1	1	3	1	1	3	2	1	2
1979	1	1	3	3	1	3	2	1	2
1980	1	1	3	3	1	3	2	1	2
1981	1	1	3	3	1	3	2	1	2
1982	1	1	3	3	1	2	2	1	2
1983	1	1	3	3	1	2	2	1	2
1984	1	1	3	3	1	2	2	1	2
1985	1	4	3	3	1	3	2	1	2
1986	1	4	3	4	1	3	2	1	2

1987	1	4	3	4	1	3	2	1	2
1988	1	4	3	4	1	3	2	1	2
1989	1	4	3	4	1	3	2	1	2
1990	1	4	3	4	1	3	2	1	2

In the last seven years (1984-1990) the manufacturing had a real GDP higher than hypothetical, which in 1984 and in 1989-1990 was the result of a positive differential shift that exceeded the negative structural shift, while from 1985 to 1988, it resulted from the convergent effect of the positive value of both shifts. The sector's capital-output ratio was higher than the Yugoslav average in 1970-1973 and in 1979-1983, after which the effect of the negative structural shift prevailed.

Only in the first year catering and tourism achieved a real GDP higher than hypothetical, primarily because of the continuously negative differential shift.

The GDPs of agriculture, water management and transport and communication were continuously below hypothetical GDPs. In agriculture this was the consequence of the continuously negative differential shift, as well as the predominant negative structural shift (the structural shift was positive only in 1984 and 1986-1990). Water management had a continuously negative structural component, while the differential shift was positive only in the last six years (1985-1990). In the case of transport and communication, the reasons for a continuously smaller real GDP relative to hypothetical lied in the continuously negative values of both shifts.

As shown in *Table 2.143*, Macedonia's economy specialized in agriculture throughout the surveyed period although it was a comparatively bad sector (Type 1 allocation effect). The same goes for construction (with the exception of 1976 – Type 2 allocation effect), as well as for water management up until 1985. Beginning in 1986 until the end of the surveyed period, water management was a comparatively good, specialized in sector (Type 4 allocation effect).

Forestry was a non-specialized and comparatively good sector in all of the years of the surveyed period (Type 3 allocation effect). Artisanship was also non-specialized in, but it also appeared as comparatively bad during seven years (1972, 1973, 1976 and 1982-1984) and was therefore characterized by the Type 2 allocation effect. In all of the other years it was Type 3.

Transport and communication and catering and tourism continuously appeared as comparatively bad sectors which Macedonia did not specialize in (Type 2 allocation effect).

In the case of trade a certain (unwelcome) regularity in changing the sector's rating manifested itself: initially (1965-1974) it appeared as comparatively good but non-specialized in (Type 3 allocation effect), then (1975-1977) as comparatively bad and non-specialized in, and eventually (1978-1990) as a comparatively bad sector in which Macedonia specialized (Type 1 allocation effect).

The manufacturing “passed” through all types of allocation effect: initially (1965-1969 and in 1976) it was Type 2, followed by Type 3 (1970-1972 and 1979-1985) meanwhile (1974, 1975, 1977 and 1978) by Type 1, and ultimately (1973 and 1986-1990) it was Type 4.

Slovenia

Data on the efficiency of fixed assets in the Slovenian economy’s social sector (*Table 2.144*) shows a continuous drop in efficiency: 1965 was the year of the highest (0.482), and 1990 of the lowest (0.266) capital-output ratio.

On average, the efficiency of fixed assets in Slovenia’s economy amounted to 0,326. Much like in the case of Bosnia and Herzegovina and Montenegro, in Slovenia, too, the most efficient were fixed assets in trade (a capital-output ratio of 0,933), whereas the least efficient fixed assets were in transport and communication (0,147).

Slovenia’s real GDP was higher than hypothetical (*Table 2.148*) throughout. This was the result of both the structural and differential shifts being positive (*Tables 2.149* and *2.150*). During the entire period the structural component was positive, while the differential shift was negative only in 1981, 1989 and 1990.

From 1965 to 1978 agriculture had a smaller, and from 1979 to 1990 a real GDP higher than hypothetical. This trend was crucially influenced by the differential shift, which was positive from 1978 to 1990.

Table 2.144 SLOVENIA: EFFICINENCY OF FIXED ASSETS

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	0,482	0,270	0,710	0,835	0,417	1,607	0,661	0,165	2,374	0,842
1966	0,470	0,221	0,673	0,741	0,409	1,463	0,681	0,164	2,346	0,708
1967	0,459	0,232	0,685	0,675	0,391	1,473	0,656	0,169	2,090	0,622
1968	0,454	0,238	0,704	0,588	0,390	1,339	0,680	0,171	1,890	0,506
1969	0,456	0,240	0,667	0,519	0,393	1,322	0,705	0,176	1,719	0,460
1970	0,464	0,261	0,709	0,516	0,411	1,323	0,741	0,178	1,452	0,392
1971	0,461	0,339	0,803	0,498	0,408	1,251	0,729	0,178	1,349	0,326
1972	0,449	0,292	0,643	0,459	0,397	1,190	0,728	0,177	1,256	0,313
1973	0,439	0,332	0,750	0,432	0,397	1,045	0,684	0,174	1,207	0,287
1974	0,452	0,333	0,764	0,422	0,407	1,144	0,631	0,183	1,208	0,274
1975	0,441	0,311	0,690	0,430	0,399	1,135	0,717	0,172	1,122	0,281
1976	0,416	0,331	0,764	0,414	0,378	0,949	0,723	0,166	1,043	0,244

1977	0,418	0,330	0,866	0,414	0,377	0,984	0,716	0,166	1,083	0,245
1978	0,418	0,346	0,750	0,386	0,367	1,021	0,684	0,170	1,155	0,252
1979	0,418	0,389	0,813	0,362	0,362	1,078	0,607	0,171	1,166	0,283
1980	0,407	0,416	0,694	0,348	0,352	1,164	0,600	0,166	1,109	0,276
1981	0,373	0,409	0,640	0,352	0,327	1,035	0,563	0,156	0,992	0,264
1982	0,358	0,422	0,610	0,356	0,323	0,857	0,546	0,153	0,939	0,248
1983	0,340	0,421	0,587	0,322	0,308	0,736	0,531	0,146	0,937	0,257
1984	0,345	0,467	0,490	0,314	0,310	0,724	0,501	0,152	0,959	0,262
1985	0,344	0,427	0,392	0,308	0,311	0,723	0,480	0,153	0,959	0,268
1986	0,345	0,445	0,373	0,280	0,311	0,778	0,470	0,153	0,972	0,263
1987	0,334	0,489	0,259	0,268	0,299	0,817	0,414	0,150	0,902	0,237
1988	0,314	0,478	0,265	0,257	0,282	0,702	0,385	0,148	0,839	0,231
1989	0,302	0,413	0,127	0,229	0,278	0,625	0,383	0,142	0,807	0,192
1990	0,266	0,391	0,208	0,166	0,243	0,506	0,345	0,134	0,697	0,184

Table 2.145 EFFICIENCY IN SLOVENIA: HYPOTHETICAL GDP

1972 prices										
Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	20937	884	43	224	11985	642	328	5480	881	469
1966	21926	1084	46	253	12432	691	342	5582	942	554
1967	22223	1077	47	263	12734	690	325	5434	1076	578
1968	23600	1062	46	290	13485	827	325	5590	1240	734
1969	26106	1085	50	333	15054	886	334	5926	1551	886
1970	28041	1063	50	347	15767	977	338	6385	2027	1087
1971	30407	955	52	363	17055	1067	366	6794	2421	1333
1972	32405	992	58	395	18387	1183	380	6885	2697	1429
1973	33880	1077	61	414	18935	1326	411	7319	2817	1519
1974	37081	1184	66	453	20862	1493	488	7790	3094	1650
1975	38993	1190	69	443	22136	1650	553	8011	3252	1689
1976	40224	1193	66	434	22810	1812	552	8108	3397	1850
1977	43231	1265	71	474	24674	1935	597	8694	3542	1978
1978	47503	1361	83	508	27579	2085	677	9436	3705	2067
1979	51000	1422	93	535	29718	2212	785	10226	3882	2126
1980	52191	1427	92	534	30507	2142	827	10611	3887	2164

1981	53897	1411	94	523	32243	2090	851	10674	3903	2107
1982	53340	1420	93	526	31631	2062	880	10792	3857	2079
1983	53895	1405	92	542	32712	1919	877	10635	3728	1984
1984	54696	1418	110	554	33259	1960	925	10693	3770	2007
1985	55419	1432	120	581	33390	2051	973	11031	3791	2051
1986	56871	1465	130	589	34309	2088	1008	11365	3843	2073
1987	56184	1442	184	593	33945	2146	988	11097	3760	2029
1988	55521	1453	184	598	33554	2187	977	10869	3695	2003
1989	56066	1493	188	605	33755	2214	992	11047	3754	2020
1990	50959	1453	175	541	30443	2047	898	10134	3446	1821

Table 2.146 EFFICIENCY IN SLOVENIA: STRUCTURAL SHIFT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	62	-104	-31	96	-2319	1640	316	-3323	3567	221
1966	305	-34	-33	106	-2584	1730	297	-3341	3990	173
1967	172	-52	-33	91	-2902	1806	272	-3076	3999	67
1968	385	-112	-34	75	-3018	2110	251	-3065	4132	48
1969	698	-159	-37	59	-3368	2133	258	-3189	4967	34
1970	1395	-255	-38	65	-3400	2285	268	-3328	5969	-170
1971	2003	-119	-39	64	-3702	2154	273	-3487	7148	-289
1972	2084	-160	-44	58	-3645	2188	293	-3552	7359	-413
1973	2498	-137	-46	50	-3594	2097	303	-3662	7966	-478
1974	2872	-132	-50	27	-3670	2302	307	-3875	8538	-576
1975	3376	-226	-54	24	-3813	2805	406	-4067	8889	-587
1976	3447	-155	-50	19	-3975	3138	416	-4064	8810	-692
1977	3424	-152	-53	29	-4190	3421	381	-4491	9201	-722
1978.	3247	-245	-63	-12	-4901	3852	373	-4790	9791	-758
1979	2955	-228	-71	-25	-5384	4238	311	-5240	10094	-741
1980	2418	-222	-70	-42	-5178	3968	320	-5421	9822	-759
1981	2017	-194	-70	-18	-4686	3534	329	-5504	9346	-720
1982	1826	-48	-68	5	-4552	3066	370	-5687	9415	-675
1983	1463	-33	-66	3	-4138	2291	380	-5477	9100	-598
1984	1511	42	-81	9	-3458	2043	374	-5473	8652	-597
1985	1690	-39	-88	1	-3026	1972	396	-5581	8653	-598

1986	1758	36	-98	-9	-2842	1884	228	-5658	8936	-719
1987	1741	23	-138	-15	-2294	1867	124	-5260	8221	-787
1988	1720	34	-137	-8	-1940	1602	135	-5029	7778	-716
1989	1805	67	-141	-32	-1513	1529	156	-5136	7833	-959
1990	1610	164	-130	-53	-1523	1315	98	-4600	7179	-839

Table 2.147 EFFICIENCY IN SLOVENIA: DIFFERENTIAL SHIFT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	874	-263	54	86	1166	-47	-174	-202	87	166
1966	555	-519	55	56	1392	-185	-123	-220	-41	141
1967	1142	-449	61	55	1666	-150	-105	-236	117	184
1968	1181	-356	64	36	1884	-336	-57	-276	132	90
1969	1007	-318	65	12	2134	-283	-42	-303	-290	32
1970	1111	-157	71	8	2845	-231	-19	-398	-1091	82
1971	697	-70	86	-0	3078	-66	-8	-454	-1850	-18
1972	638	-134	76	-15	2895	30	-5	-395	-1878	63
1973	697	-49	99	-19	3405	30	-13	-491	-2310	45
1974	934	-92	107	-14	3530	372	-44	-441	-2516	31
1975	963	-32	105	13	3908	261	39	-470	-2953	92
1976	275	-0	117	19	3846	-428	82	-501	-2891	31
1977	620	-21	144	11	3839	-371	141	-432	-2705	14
1978	648	103	142	12	3538	-421	150	-500	-2417	42
1979	1351	241	174	-8	3577	-268	140	-448	-2234	177
1980	1855	374	147	1	3227	513	171	-511	-2250	183
1981	-149	386	143	6	1676	383	150	-546	-2504	158
1982	315	371	139	13	2599	8	148	-315	-2742	94
1983	582	431	138	-14	2169	99	164	-408	-2172	172
1984	1062	549	135	-34	1538	305	108	-278	-1446	185
1985	1030	474	112	-36	1336	502	57	-289	-1348	222
1986	904	476	116	-79	833	954	201	-448	-1450	302
1987	1010	751	104	-78	239	1494	172	-605	-1335	268
1988	45	792	113	-84	-543	1255	122	-550	-1295	236
1989	-1054	509	103	-109	-775	903	128	-638	-1419	243
1990	-1259	535	93	-147	-853	566	178	-397	-1522	288

Table 2.148 EFFICIENCY IN SLOVENIA:
RATIO OF HYPOTHETICAL AND REAL GDP

In %

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	95.7	170.9	65.0	55.2	110.6	28.7	69.8	280.3	19.4	54.8
1966	96.2	204.0	67.1	61.0	110.6	30.9	66.3	276.3	19.3	63.9
1967	94.4	186.9	63.2	64.2	110.8	29.4	66.0	256.1	20.7	69.7
1968	93.8	178.8	60.5	72.4	109.2	31.8	62.6	248.6	22.5	84.2
1969	93.9	178.3	64.2	82.5	108.9	32.4	60.7	243.5	24.9	93.1
1970	91.8	163.4	60.1	82.6	103.6	32.2	57.6	240.1	29.4	108.8
1971	91.8	124.8	52.7	85.0	103.8	33.8	58.1	238.1	31.4	129.9
1972	92.3	142.0	64.4	90.3	104.3	34.8	56.9	234.3	33.0	132.5
1973	91.4	121.0	53.5	92.8	101.0	38.4	58.7	231.2	33.2	139.8
1974	90.7	123.3	53.7	97.1	100.7	35.8	65.0	224.2	33.9	149.4
1975	90.0	127.7	57.6	92.4	99.6	35.0	55.4	230.6	35.4	141.5
1976	91.5	114.9	49.8	91.9	100.6	40.1	52.6	228.8	36.5	155.6
1977	91.4	115.8	44.1	92.2	101.4	38.8	53.4	230.6	35.3	155.7
1978	92.4	111.7	51.5	100.0	105.2	37.8	56.5	227.5	33.4	153.0
1979	92.2	99.1	47.4	106.5	106.5	35.8	63.5	225.4	33.1	136.1
1980	92.4	90.4	54.2	108.2	106.8	32.3	62.8	226.7	33.9	136.3
1981	96.7	88.0	56.3	102.4	110.3	34.8	64.0	230.9	36.3	136.3
1982	96.1	81.4	56.4	96.6	106.6	40.2	63.0	225.3	36.6	138.8
1983	96.3	77.9	55.8	101.9	106.4	44.5	61.7	223.9	35.0	127.3
1984	95.5	70.6	67.2	104.8	106.1	45.5	65.7	216.4	34.3	125.9
1985	95.3	76.7	83.5	106.3	105.3	45.3	68.2	213.7	34.2	122.4
1986	95.5	74.1	88.3	117.6	106.2	42.4	70.1	216.1	33.9	125.2
1987	95.3	65.1	123.0	118.6	106.4	39.0	76.9	212.1	35.3	134.3
1988	96.9	63.7	114.9	118.3	108.0	43.4	79.2	205.5	36.3	131.5
1989	98.7	72.2	126.0	130.3	107.3	47.6	77.7	209.5	36.9	154.9
1990	99.3	67.5	126.8	158.8	108.5	52.1	76.5	197.3	37.9	143.3

Table 2.149 EFFICIENCY IN SLOVENIA:
RATIO OF STRUCTURAL SHIFT AND REAL GDP

In %

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	0.3	-20.0	-47.6	23.6	-21.4	73.4	67.1	-170.0	78.6	25.9
1966	1.3	-6.4	-48.1	25.5	-23.0	77.4	57.6	-165.4	81.6	19.9
1967	0.7	-9.0	-45.1	22.4	-25.2	77.0	55.3	-145.0	77.0	8.0
1968	1.5	-18.9	-44.7	18.7	-24.4	81.1	48.3	-136.4	75.1	5.5
1969	2.5	-26.1	-47.8	14.6	-24.4	78.0	46.9	-131.0	79.8	3.6
1970	4.6	-39.2	-46.1	15.4	-22.4	75.4	45.7	-125.1	86.4	-17.0
1971	6.1	-15.6	-40.0	15.1	-22.5	68.3	43.3	-122.2	92.6	-28.2
1972	5.9	-22.9	-49.4	13.2	-20.7	64.3	43.9	-120.8	90.0	-38.3
1973	6.7	-15.4	-40.6	11.3	-19.2	60.7	43.2	-115.7	94.0	-44.0
1974	7.0	-13.7	-40.5	5.8	-17.7	55.3	40.9	-111.5	93.7	-52.2
1975	7.8	-24.3	-44.9	4.9	-17.2	59.5	40.7	-117.1	96.7	-49.2
1976	7.8	-14.9	-38.0	4.1	-17.5	69.4	39.6	-114.7	94.6	-58.2
1977	7.2	-13.9	-33.0	5.6	-17.2	68.6	34.0	-119.1	91.7	-56.8
1978.	6.3	-20.1	-39.1	-2.4	-18.7	69.8	31.1	-115.5	88.4	-56.1
1979	5.3	-15.9	-36.2	-4.9	-19.3	68.6	25.1	-115.5	86.0	-47.4
1980	4.3	-14.1	-41.0	-8.5	-18.1	59.9	24.3	-115.8	85.7	-47.8
1981	3.6	-12.1	-41.7	-3.5	-16.0	58.8	24.7	-119.1	87.0	-46.6
1982	3.3	-2.7	-41.4	1.0	-15.3	59.7	26.5	-118.7	89.4	-45.0
1983	2.6	-1.8	-40.3	0.6	-13.5	53.2	26.7	-115.3	85.4	-38.3
1984	2.6	2.1	-49.3	1.6	-11.0	47.4	26.6	-110.7	78.8	-37.5
1985	2.9	-2.1	-61.1	0.2	-9.5	43.6	27.8	-108.1	78.0	-35.7
1986	3.0	1.8	-66.9	-1.8	-8.8	38.2	15.9	-107.6	78.9	-43.4
1987	3.0	1.0	-92.1	-3.0	-7.2	33.9	9.7	-100.5	77.2	-52.1
1988	3.0	1.5	-85.6	-1.6	-6.2	31.8	11.0	-95.1	76.4	-47.0
1989	3.2	3.2	-94.8	-6.9	-4.8	32.9	12.3	-97.4	77.0	-73.5
1990	3.1	9.6	-94.1	-15.7	-5.4	33.5	8.3	-89.5	78.9	-66.0

Table 2.150 EFFICIENCY IN SLOVENIA:
RATIO OF DIFFERENTIAL SHIFT AND REAL GDP

In %

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	4.0	-50.8	82.6	21.2	10.8	-2.1	-36.9	-10.3	1.9	19.4
1966	2.4	-97.7	81.0	13.5	12.4	-8.3	-24.0	-10.9	-0.8	16.2
1967	4.9	-77.9	81.9	13.4	14.5	-6.4	-21.3	-11.1	2.2	22.3
1968	4.7	-59.9	84.2	8.9	15.3	-12.9	-10.9	-12.3	2.4	10.3
1969	3.6	-52.2	83.6	2.9	15.4	-10.4	-7.6	-12.4	-4.7	3.3
1970	3.6	-24.2	86.0	2.0	18.7	-7.6	-3.2	-15.0	-15.8	8.2
1971	2.1	-9.2	87.4	-0.1	18.7	-2.1	-1.3	-15.9	-24.0	-1.7
1972	1.8	-19.2	85.0	-3.5	16.4	0.9	-0.7	-13.4	-23.0	5.8
1973	1.9	-5.6	87.1	-4.2	18.2	0.9	-1.9	-15.5	-27.3	4.2
1974	2.3	-9.6	86.8	-2.9	17.0	8.9	-5.8	-12.7	-27.6	2.8
1975	2.2	-3.5	87.3	2.7	17.6	5.5	3.9	-13.5	-32.1	7.7
1976	0.6	-0.0	88.2	4.0	17.0	-9.5	7.8	-14.1	-31.0	2.6
1977	1.3	-1.9	88.9	2.2	15.8	-7.4	12.6	-11.5	-26.9	1.1
1978	1.3	8.4	87.6	2.4	13.5	-7.6	12.5	-12.0	-21.8	3.1
1979	2.4	16.8	88.8	-1.6	12.8	-4.3	11.3	-9.9	-19.0	11.3
1980	3.3	23.7	86.7	0.3	11.3	7.7	12.9	-10.9	-19.6	11.5
1981	-0.3	24.1	85.4	1.1	5.7	6.4	11.3	-11.8	-23.3	10.2
1982	0.6	21.3	85.0	2.4	8.8	0.2	10.6	-6.6	-26.0	6.3
1983	1.0	23.9	84.4	-2.6	7.1	2.3	11.6	-8.6	-20.4	11.1
1984	1.9	27.3	82.0	-6.4	4.9	7.1	7.7	-5.6	-13.2	11.6
1985	1.8	25.4	77.7	-6.6	4.2	11.1	4.0	-5.6	-12.1	13.3
1986	1.5	24.1	78.6	-15.8	2.6	19.4	14.0	-8.5	-12.8	18.2
1987	1.7	33.9	69.1	-15.6	0.7	27.1	13.4	-11.6	-12.5	17.8
1988	0.1	34.7	70.6	-16.7	-1.7	24.9	9.9	-10.4	-12.7	15.5
1989	-1.9	24.6	68.8	-23.4	-2.5	19.4	10.1	-12.1	-14.0	18.6
1990	-2.5	24.9	67.4	-43.1	-3.0	14.4	15.2	-7.7	-16.7	22.7

Only in the period from 1987 to 1990 did water management have a real GDP that was smaller than hypothetical, which was caused by a continuously negative structural shift, and which in these four years prevailed over a continuously positive differential shift.

The capital-output ratio of forestry in Slovenia was from 1965 to 1977 and in 1982 higher, and from 1978 to 1981 and from 1983 to 1990 lower than the average Yugoslav. From 1965 to 1977 that was the result of the positive effect of both shifts (the exception was from 1971 to 1974, in which the positive structural shift prevailed over the negative differential shift). From 1978 to 1981 the negative structure prevailed over the positive differential shift (with the exception of 1979, when both shifts were negative). In 1982, both shifts were positive. From 1983 to 1985 the negative differential shift prevailed over the positive structural shift, while in the last five years (1986-1990) both shifts were negative.

The manufacturing's real GDP was continuously smaller than hypothetical, although the efficiency of fixed assets in this sector of the Slovenian economy was below the Yugoslav average for the manufacturing only in the last three years of the surveyed period. The reason lied in a continuously negative structural shift, whose effects could not be annulled by the positive differential shift in 1988. In 1989 and 1990, the sector's differential shift was also negative.

The construction, artisanship and trade sectors achieved a real GDP higher than hypothetical during every year of the surveyed period. In all three sectors this was primarily the result of a continuously positive structural shift that was high enough to compensate for the negative effects of below-average sectoral efficiency.

Despite registering a negative differential shift in only one year (1971), as of 1970, until the end of the surveyed period, catering and tourism's real GDP was smaller than hypothetical. This means that as of that year the negative structural shift prevailed. Transport and communication in Slovenia, as in the case of Macedonia, was characterized throughout the analyzed period by negative structural and differential shifts, which resulted in real GDP being continuously smaller than hypothetical.

Table 2.151 EFFICIENCY IN SLOVENIA: NET DIFFERENTIAL SHIFT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	1131	-346	330	107	1123	-50	-110	-198	86	190
1966	786	-620	359	63	1354	-194	-79	-217	-38	159
1967	1379	-559	400	61	1604	-160	-70	-232	111	224
1968	1432	-479	476	38	1813	-330	-42	-271	126	100
1969	1274	-477	552	12	2038	-297	-32	-299	-257	34
1970	1734	-254	631	8	2763	-244	-15	-381	-867	91
1971	1837	-132	845	-0	3016	-71	-7	-432	-1364	-18
1972	1514	-252	704	-14	2788	31	-4	-388	-1420	69
1973	2017	-89	890	-17	3332	30	-11	-474	-1693	50
1974	2310	-164	974	-13	3426	362	-34	-437	-1839	35

1975	2529	-59	960	13	3809	246	30	-466	-2107	104
1976	2095	-0	1149	19	3768	-382	65	-493	-2066	34
1977	2504	-40	1396	11	3745	-333	117	-430	-1977	15
1978	2295	194	1248	12	3414	-388	125	-499	-1857	46
1979	3228	451	1429	-8	3488	-250	117	-434	-1760	197
1980	3579	702	1200	1	3138	505	142	-492	-1821	203
1981	1550	751	1124	6	1594	396	126	-545	-2086	182
1982	1954	702	1094	14	2496	8	122	-307	-2283	109
1983	2128	838	1077	-14	2044	108	139	-406	-1867	210
1984	2505	1094	877	-35	1443	333	88	-281	-1237	223
1985	2249	933	675	-36	1263	539	45	-291	-1145	266
1986	2240	944	725	-80	787	1020	160	-448	-1227	359
1987	2380	1493	454	-78	225	1564	137	-611	-1129	325
1988	1447	1558	486	-84	-512	1278	97	-561	-1100	284
1989	49	993	433	-108	-730	922	101	-652	-1203	294
1990	-218	983	380	-149	-805	570	140	-406	-1285	354

Table 2.152 EFFICIENCY IN SLOVENIA: ALLOCATION EFFECT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-257	83	-276	-21	42	3	-64	-3	2	-24
1966	-231	101	-304	-7	39	9	-45	-3	-2	-19
1967	-237	111	-339	-6	61	10	-35	-4	5	-39
1968	-251	123	-412	-2	71	-6	-15	-5	6	-11
1969	-267	160	-487	-0	96	13	-10	-4	-34	-2
1970	-623	97	-559	0	82	12	-4	-17	-224	-9
1971	-1140	62	-760	-0	63	5	-2	-22	-486	0
1972	-876	119	-627	-1	107	-2	-1	-7	-458	-6
1973	-1320	40	-790	-1	73	-0	-3	-17	-617	-4
1974	-1376	73	-868	-1	104	10	-10	-3	-677	-4
1975	-1567	27	-855	-0	100	15	9	-4	-846	-12
1976	-1820	0	-1032	-0	78	-46	17	-8	-825	-3
1977	-1883	19	-1252	0	94	-38	24	-2	-727	-1
1978	-1647	-92	-1106	-0	123	-33	24	-0	-560	-5
1979	-1877	-210	-1255	0	89	-17	22	-14	-473	-20

1980	-1724	-328	-1053	-0	88	8	29	-19	-429	-20
1981	-1699	-365	-982	-0	82	-13	24	-2	-418	-24
1982	-1639	-331	-955	-1	103	-0	26	-8	-459	-15
1983	-1546	-406	-939	1	126	-10	26	-1	-305	-37
1984	-1442	-545	-742	1	95	-28	19	3	-208	-38
1985	-1219	-459	-563	0	73	-37	11	1	-203	-43
1986	-1336	-468	-610	0	46	-66	42	0	-223	-57
1987	-1370	-742	-350	-0	13	-70	35	7	-205	-57
1988	-1402	-766	-373	-1	-31	-23	25	11	-195	-49
1989	-1104	-484	-330	-0	-45	-19	27	13	-216	-51
1990	-1040	-448	-287	2	-48	-4	38	9	-238	-66

Table 2.153 EFFICIENCY IN SLOVENIA: TYPES OF ALLOCATION EFFECT

Year	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	2	3	3	4	2	1	1	4	3
1966	2	3	3	4	2	1	1	1	3
1967	2	3	3	4	2	1	1	4	3
1968	2	3	3	4	1	1	1	4	3
1969	2	3	3	4	2	1	1	1	3
1970	2	3	4	4	2	1	1	1	3
1971	2	3	1	4	2	1	1	1	3
1972	2	3	1	4	3	1	1	1	3
1973	2	3	1	4	3	1	1	1	3
1974	2	3	1	4	4	1	1	1	3
1975	2	3	3	4	4	4	1	1	3
1976	2	3	3	4	1	4	1	1	3
1977	2	3	4	4	1	4	1	1	3
1978	3	3	3	4	1	4	1	1	3
1979	3	3	2	4	1	4	1	1	3
1980	3	3	3	4	4	4	1	1	3
1981	3	3	3	4	3	4	1	1	3
1982	3	3	3	4	3	4	1	1	3
1983	3	3	2	4	3	4	1	1	3
1984	3	3	2	4	3	4	2	1	3

1985	3	3	2	4	3	4	2	1	3
1986	3	3	2	4	3	4	2	1	3
1987	3	3	1	4	3	4	2	1	3
1988	3	3	1	1	3	4	2	1	3
1989	3	3	1	1	3	4	2	1	3
1990	3	3	2	1	3	4	2	1	3

During the entire analyzed period Slovenia's agriculture was non-specialized in: from 1965 to 1977 it was a comparatively bad sector (Type 2 allocation effect), and from 1978 to 1990 it was comparatively good (Type 3 allocation effect) – see *Table 2.153*.

The Type 3 allocation effect also characterized water management and catering and tourism in all of the surveyed years. The same type marked forestry periodically (1965-1969, 1975-1976, 1978, and 19801-982); in 1970 and 1977 this sector was also comparatively good, and specialized in (Type 4 allocation effect). In the 1971-1974 and 1987-1989 sub-periods, Slovenia specialized in forestry, although it was comparatively bad (Type 1 allocation effect). In all other years this sector was marked Type 2.

The manufacturing, artisanship and trade were sectors which Slovenia specialized in during the entire surveyed period. The manufacturing was comparatively good in almost all of these years and was characterized by the Type 4 allocation effect (in the last three years, however, it was comparatively bad and thus was Type 1). The artisanship sector was comparatively bad from 1965 to 1974 (Type 1 allocation effect), while as of 1975 it was comparatively good (Type 4 allocation effect. With the exception of 1965, 1967 and 1969 (when it was Type 4), trade was characterized by the Type 1 allocation effect throughout the surveyed period.

In the case of construction, all types of allocation effect appeared during the 26 surveyed years: in 1974, 1975 and 1980 it was Type 4; in the 1972-1973 and 1981-1990 sub-periods it was Type 3; during six years (1965-1967 and 1960-1971) it was Type 2, and, finally, in 1968 and from 1976 to 1979 it was Type 1.

Serbia

Table 2.154 shows capital-output ratio trends in the Serbian social sector's segments. In this republic, too, the average capital-output ratio reached its maximum in 1965 (0.495), and its minimum in 1990 (0.302).

The average capital-output ratio in Serbia's economy from 1965 to 1988 amounted to 0.350. Trade sector was the best: one dinar in this sector contributed

to 1.25 dinars of GDP. On the other hand, water management was the worst: its capital-output ratio amounted, on average, to 0.066.

In every year during the surveyed period, the efficiency of fixed assets of the Serbian economy was above the Yugoslav average, meaning that its real GDP was continuously higher than hypothetical (*Table 2.158*). In 1965-1969, 1973-1974, 1976-1977 and 1981-1990 it was the result of the cumulative effect of both shifts being positive. In 1975 and 1978-1980, the positive differential shift exceeded the negative structural shift, while in 1970-1972 the positive structural shift prevailed over the negative differential shift (*Tables 2.159 and 2.160*).

Construction, artisanship and trade had a real GDP higher than hypothetical throughout the surveyed period. In the case of artisanship, that was the result of the convergent effect of both positive shifts, while in construction and trade it was the consequence of the positive structural shift exceeding the differential shift in the years in which the latter was negative.

Next in the line is catering and tourism, which in all of the analyzed years had a positive differential shift, i.e. a sectoral efficiency of fixed assets higher than the Yugoslav average. The result was that its real GDP was below hypothetical in only six years.

In the last eight years (1983-1990) forestry's GDP was below hypothetical, which from 1983 to 1985 was the result of the negative differential shift prevailing over the positive structural shift, in 1986 and 1987 of the cumulative negative effect of both shifts, and from 1988 to 1990 of the negative structural shift prevailing over the positive differential shift.

Table 2.154 SERBIA: EFFICIENCY OF FIXED ASSETS

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	0,495	0,462	0,127	1,384	0,370	1,531	1,197	0,217	2,088	1,478
1966	0,487	0,517	0,130	1,274	0,346	1,636	1,120	0,214	2,392	1,511
1967	0,461	0,478	0,122	1,181	0,316	1,608	1,043	0,224	1,993	1,339
1968	0,450	0,437	0,111	1,059	0,307	1,585	0,975	0,232	1,748	1,351
1969	0,448	0,406	0,095	0,846	0,312	1,412	0,951	0,238	1,706	1,195
1970	0,438	0,317	0,082	0,807	0,311	1,424	0,951	0,244	1,626	0,749
1971	0,433	0,375	0,085	0,769	0,312	1,171	0,915	0,239	1,694	0,623
1972	0,423	0,349	0,080	0,925	0,319	1,065	0,930	0,227	1,531	0,483
1973	0,411	0,366	0,079	0,821	0,315	0,949	0,902	0,216	1,619	0,432
1974	0,422	0,375	0,077	0,742	0,330	0,962	0,904	0,220	1,696	0,398
1975	0,413	0,338	0,065	0,662	0,327	1,045	0,811	0,208	1,688	0,456
1976	0,401	0,339	0,066	0,582	0,319	1,045	0,725	0,201	1,493	0,463

1977	0,408	0,357	0,076	0,572	0,326	1,113	0,657	0,196	1,519	0,460
1978	0,412	0,323	0,075	0,491	0,328	1,211	0,634	0,200	1,545	0,461
1979	0,412	0,317	0,073	0,447	0,327	1,271	0,597	0,193	1,555	0,458
1980	0,402	0,316	0,078	0,410	0,325	1,225	0,567	0,173	1,533	0,409
1981	0,393	0,309	0,080	0,392	0,327	1,083	0,539	0,174	1,444	0,392
1982	0,381	0,332	0,080	0,352	0,317	0,987	0,518	0,162	1,406	0,399
1983	0,362	0,314	0,080	0,317	0,312	0,789	0,475	0,157	1,339	0,382
1984	0,367	0,336	0,077	0,330	0,326	0,752	0,474	0,161	1,268	0,367
1985	0,363	0,317	0,075	0,322	0,329	0,702	0,472	0,161	1,258	0,339
1986	0,363	0,331	0,065	0,316	0,333	0,679	0,413	0,166	1,285	0,301
1987	0,355	0,320	0,066	0,300	0,331	0,659	0,375	0,169	1,201	0,277
1988	0,340	0,313	0,063	0,302	0,324	0,589	0,368	0,161	1,123	0,258
1989	0,339	0,318	0,060	0,284	0,322	0,561	0,365	0,169	1,108	0,246
1990	0,302	0,300	0,056	0,252	0,281	0,498	0,330	0,151	1,030	0,213

Table 2.155 EFFICIENCY IN SERBIA: HYPOTHETICAL GDP

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	42404	3895	887	103	23915	1578	354	8997	2199	476
1966	44580	4210	1062	112	25408	1550	376	9379	1996	485
1967	46430	4419	1151	115	26612	1646	380	9179	2418	508
1968	48800	4582	1209	123	27976	1779	419	9320	2847	545
1969	54197	5361	1551	155	30756	2191	454	9780	3279	668
1970	58909	5804	1541	170	33279	2353	481	10402	3824	1056
1971	64873	6122	1822	179	36860	2712	527	11325	4036	1290
1972	68167	6261	1892	149	38047	2899	546	12117	4642	1613
1973	71295	6244	1944	166	39810	3094	571	13286	4400	1780
1974	77667	6699	2163	197	43305	3330	623	14597	4591	2162
1975	80089	6718	2331	219	45381	3352	673	14980	4523	1911
1976	82620	7054	2332	236	46639	3586	756	15156	4920	1941
1977	88843	7399	2487	262	50113	3719	897	16635	5238	2093
1978	96737	7875	2557	305	54896	3978	1008	18137	5739	2242
1979	104303	8007	2651	343	60107	4147	1185	19229	6169	2465
1980	106856	8067	2673	348	62302	4231	1217	19208	6284	2526
1981	106793	7998	2545	365	62186	4259	1250	19302	6385	2503

1982	105772	7857	2481	406	61691	4186	1280	19036	6344	2491
1983	104212	7857	2372	419	60590	4162	1336	18867	6178	2430
1984	106163	8190	2423	419	61531	4262	1372	19266	6248	2453
1985	108072	8163	2448	429	62589	4530	1415	19795	6227	2474
1986	111491	8450	2935	465	64396	4522	1460	20485	6293	2486
1987	109634	8281	2854	462	63351	4467	1446	20220	6122	2431
1988	107968	8191	2773	462	62563	4368	1427	19800	5997	2386
1989	107967	8282	2746	474	62260	4363	1415	20006	6007	2415
1990	97549	7513	2441	427	55891	3926	1272	18368	5452	2259

Table 2.156 EFFICIENCY IN SERBIA: STRUCTURAL SHIFT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	2354	-457	-649	44	-4628	4032	340	-5456	8902	225
1966	1077	-131	-761	47	-5281	3886	327	-5614	8453	152
1967	1417	-213	-821	40	-6064	4310	318	-5196	8985	59
1968	1668	-484	-893	32	-6262	4540	323	-5111	9488	36
1969	2095	-785	-1156	27	-6882	5278	351	-5263	10499	26
1970	1837	-1393	-1183	32	-7176	5504	381	-5421	11259	-165
1971	1573	-764	-1385	32	-8001	5476	393	-5812	11916	-280
1972	1753	-1009	-1451	22	-7542	5360	420	-6250	12668	-467
1973	741	-795	-1474	20	-7557	4893	421	-6648	12441	-560
1974	196	-745	-1632	12	-7618	5135	392	-7261	12669	-755
1975	-614	-1276	-1817	12	-7817	5697	494	-7605	12364	-665
1976	406	-914	-1779	10	-8128	6209	569	-7596	12759	-726
1977	160	-886	-1859	16	-8510	6575	572	-8593	13609	-763
1978	-78	-1417	-1941	-7	-9755	7347	555	-9206	15167	-822
1979	-470	-1284	-2024	-16	-10890	7947	469	-9854	16039	-859
1980	-390	-1258	-2020	-27	-10575	7839	471	-9813	15878	-887
1981	127	-1101	-1885	-13	-9037	7200	484	-9954	15288	-855
1982	446	-264	-1822	4	-8878	6223	538	-10032	15485	-808
1983	627	-182	-1711	3	-7665	4970	578	-9716	15082	-732
1984	821	240	-1775	6	-6397	4442	555	-9861	14340	-730
1985	722	-223	-1793	1	-5672	4356	576	-10015	14214	-722
1986	622	207	-2223	-7	-5334	4081	330	-10198	14630	-863

1987	627	131	-2138	-12	-4282	3887	182	-9585	13386	-943
1988	513	193	-2065	-6	-3617	3200	198	-9161	12623	-853
1989	813	371	-2067	-25	-2791	3014	223	-9301	12535	-1147
1990	834	847	-1813	-42	-2796	2522	138	-8338	11355	-1040

Table 2.157 EFFICIENCY IN SERBIA: DIFFERENTIAL SHIFT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	726	465	7	162	-122	-375	225	686	-1146	824
1966	2403	739	5	157	-681	178	230	675	116	986
1967	1536	668	-7	158	-1136	153	217	758	-279	1004
1968	1064	600	0	151	-1569	304	217	861	-649	1149
1969	487	512	-51	124	-1450	-239	205	930	-713	1171
1970	-273	-103	-63	120	-1867	4	210	965	-503	964
1971	-14	64	-73	115	-1647	-683	219	893	207	890
1972	-278	28	-76	162	-1197	-804	259	766	-153	736
1973	1070	246	-89	154	-967	-671	292	499	911	696
1974	2049	168	-123	148	-779	-656	359	513	1728	691
1975	3870	277	-131	134	-149	-232	207	485	2330	949
1976	4136	156	-148	115	608	53	116	457	1631	1148
1977	5872	394	-130	115	1216	539	74	488	1984	1192
1978	6644	125	-117	90	1523	1156	93	456	2063	1256
1979	7512	-136	-127	70	1697	1580	180	252	2672	1323
1980	7810	-26	-99	58	2074	1697	147	-580	3435	1103
1981	9700	-43	-97	45	3362	1340	136	-42	3927	1073
1982	10895	-14	-84	6	4001	1600	111	-34	4106	1204
1983	10379	-141	-82	-16	4719	882	21	-116	3977	1135
1984	11203	-77	-83	-6	5828	1018	46	18	3451	1008
1985	10953	-30	-94	-8	5984	826	47	-61	3478	811
1986	10620	-173	-136	-13	5913	712	37	35	3599	648
1987	11910	-75	-122	-14	6805	897	74	122	3594	629
1988	12266	26	-134	2	7582	876	100	-163	3492	486
1989	14027	178	-123	3	7874	833	93	651	3793	725
1990	13298	171	-113	23	6506	966	182	485	4473	604

Table 2.158 EFFICIENCY IN SERBIA:
RATIO OF HIPOTHETICAL AND REAL GDP

In %

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	93.2	99.8	361.9	33.3	124.8	30.1	38.5	212.8	22.1	31.2
1966	92.8	87.4	348.0	35.5	130.7	27.6	40.3	211.3	18.9	29.9
1967	94.0	90.7	356.3	36.7	137.1	26.9	41.6	193.6	21.7	32.3
1968	94.7	97.5	382.5	40.2	138.9	26.9	43.7	183.8	24.4	31.5
1969	95.5	105.4	451.0	50.6	137.2	30.3	45.0	179.5	25.1	35.8
1970	97.4	134.7	522.3	52.9	137.3	29.9	44.9	175.0	26.2	56.9
1971	97.7	112.9	500.7	55.0	135.5	36.1	46.3	176.8	25.0	67.9
1972	97.9	118.6	518.3	44.8	129.8	38.9	44.5	182.7	27.1	85.7
1973	97.5	109.6	510.3	48.9	127.2	42.3	44.5	186.2	24.8	92.9
1974	97.2	109.4	530.1	55.2	124.1	42.6	45.3	186.0	24.2	103.1
1975	96.1	117.5	610.2	60.0	121.3	38.0	49.0	190.6	23.5	87.1
1976	94.8	112.0	575.8	65.3	119.2	36.4	52.4	189.0	25.5	82.2
1977	93.6	107.1	499.4	66.8	117.0	34.3	58.1	195.0	25.1	83.0
1978	93.6	119.6	513.4	78.6	117.6	31.9	60.9	193.2	25.0	83.8
1979	93.7	121.6	530.2	86.3	118.1	30.3	64.6	199.7	24.8	84.1
1980	93.5	118.9	482.5	91.8	115.8	30.7	66.3	217.9	24.5	92.1
1981	91.6	116.7	452.1	91.9	110.0	33.3	66.9	207.4	24.9	92.0
1982	90.3	103.7	431.5	97.6	108.6	34.9	66.4	212.2	24.5	86.3
1983	90.4	104.3	409.0	103.4	105.1	41.6	69.0	208.8	24.5	85.8
1984	89.8	98.0	428.9	100.0	100.9	43.8	69.5	204.5	26.0	89.8
1985	90.2	103.2	436.4	101.6	99.5	46.6	69.4	203.7	26.0	96.5
1986	90.8	99.6	510.4	104.5	99.1	48.5	79.9	198.5	25.7	109.5
1987	89.7	99.3	480.5	106.0	96.2	48.3	85.0	188.0	26.5	114.8
1988	89.4	97.4	483.2	101.0	94.0	51.7	82.7	189.0	27.1	118.2
1989	87.9	93.8	493.9	104.8	92.5	53.1	81.7	176.2	26.9	121.1
1990	87.3	88.1	474.0	104.8	93.8	53.0	79.9	174.7	25.6	123.9

Table 2.159 EFFICIENCY IN SERBIA:
RATIO OF STRUCTURAL SHIFT AND REAL GDP

In %

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	5.2	-11.7	-264.8	14.3	-24.1	77.0	37.0	-129.1	89.4	14.7
1966	2.2	-2.7	-249.5	14.9	-27.2	69.2	35.1	-126.5	80.0	9.3
1967	2.9	-4.4	-254.1	12.8	-31.2	70.5	34.8	-109.6	80.8	3.7
1968	3.2	-10.3	-282.6	10.4	-31.1	68.5	33.7	-100.8	81.2	2.1
1969	3.7	-15.4	-336.0	9.0	-30.7	73.0	34.7	-96.6	80.4	1.4
1970	3.0	-32.3	-401.0	9.8	-29.6	70.0	35.6	-91.2	77.2	-8.9
1971	2.4	-14.1	-380.6	9.8	-29.4	73.0	34.5	-90.7	73.7	-14.7
1972	2.5	-19.1	-397.5	6.5	-25.7	71.9	34.3	-94.2	73.8	-24.8
1973	1.0	-14.0	-386.9	6.0	-24.2	66.9	32.8	-93.2	70.1	-29.2
1974	0.2	-12.2	-400.0	3.3	-21.8	65.8	28.5	-92.5	66.7	-36.0
1975	-0.7	-22.3	-475.8	3.2	-20.9	64.6	35.9	-96.8	64.3	-30.3
1976	0.5	-14.5	-439.3	2.9	-20.8	63.1	39.5	-94.7	66.1	-30.7
1977	0.2	-12.8	-373.2	4.0	-19.9	60.7	37.1	-100.7	65.3	-30.3
1978	-0.1	-21.5	-389.8	-1.9	-20.9	58.9	33.5	-98.1	66.0	-30.7
1979	-0.4	-19.5	-404.8	-4.0	-21.4	58.1	25.6	-102.4	64.5	-29.3
1980	-0.3	-18.5	-364.5	-7.2	-19.7	56.9	25.7	-111.3	62.0	-32.3
1981	0.1	-16.1	-334.8	-3.2	-16.0	56.3	25.9	-107.0	59.7	-31.4
1982	0.4	-3.5	-316.9	1.0	-15.6	51.8	27.9	-111.8	59.7	-28.0
1983	0.5	-2.4	-295.0	0.6	-13.3	49.6	29.9	-107.5	59.8	-25.8
1984	0.7	2.9	-314.2	1.5	-10.5	45.7	28.1	-104.7	59.7	-26.7
1985	0.6	-2.8	-319.6	0.2	-9.0	44.9	28.3	-103.0	59.4	-28.1
1986	0.5	2.4	-386.6	-1.6	-8.2	43.8	18.1	-98.8	59.7	-38.0
1987	0.5	1.6	-359.9	-2.7	-6.5	42.0	10.7	-89.1	57.9	-44.5
1988	0.4	2.3	-359.7	-1.4	-5.4	37.9	11.5	-87.4	57.1	-42.2
1989	0.7	40.2	-371.7	-5.6	-4.1	36.7	12.9	-81.9	56.1	-57.5
1990	0.7	9.9	-352.0	-10.3	-4.7	34.0	8.7	-79.3	53.4	-57.1

Table 2.160 EFFICIENCY IN SERBIA:
RATIO OF DIFFERENTIAL SHIFT AND REAL GDP

In %

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	1.6	11.9	2.9	52.4	-0.6	-7.2	24.4	16.2	-11.5	54.0
1966	5.0	15.3	1.5	49.7	-3.5	3.2	24.6	15.2	1.1	60.7
1967	3.1	13.7	-2.2	50.5	-5.9	2.5	23.7	16.0	-2.5	63.9
1968	2.1	12.8	0.1	49.4	-7.8	4.6	22.6	17.0	-5.6	66.4
1969	0.9	10.1	-15.0	40.4	-6.5	-3.3	20.3	17.1	-5.5	62.8
1970	-0.5	-2.4	-21.3	37.3	-7.7	0.1	19.6	16.2	-3.4	52.0
1971	-0.0	1.2	-20.1	35.2	-6.1	-9.1	19.3	13.9	1.3	46.8
1972	-0.4	0.5	-20.8	48.7	-4.1	-10.8	21.1	11.5	-0.9	39.1
1973	1.5	4.3	-23.4	45.2	-3.1	-9.2	22.7	7.0	5.1	36.3
1974	2.6	2.7	-30.1	41.5	-2.2	-8.4	26.1	6.5	9.1	32.9
1975	4.6	4.9	-34.4	36.8	-0.4	-2.6	15.1	6.2	12.1	43.2
1976	4.7	2.5	-36.5	31.8	1.6	0.5	8.0	5.7	8.4	48.6
1977	6.2	5.7	-26.2	29.2	2.8	5.0	4.8	5.7	9.5	47.3
1978	6.4	1.9	-23.5	23.3	3.3	9.3	5.6	4.9	9.0	46.9
1979	6.7	-2.1	-25.5	17.7	3.3	11.6	9.8	2.6	10.7	45.2
1980	6.8	-0.4	-17.9	15.4	3.9	12.3	8.0	-6.6	13.4	40.2
1981	8.3	-0.6	-17.3	11.3	5.9	10.5	7.3	-0.5	15.3	39.4
1982	9.3	-0.2	-14.6	1.4	7.0	13.3	5.8	-0.4	15.8	41.7
1983	9.0	-1.9	-14.1	-4.1	8.2	8.8	1.1	-1.3	15.8	40.1
1984	9.5	-0.9	-14.7	-1.5	9.6	10.5	2.3	0.2	14.4	36.9
1985	9.1	-0.4	-16.8	-1.9	9.5	8.5	2.3	-0.6	14.5	31.6
1986	8.7	-2.0	-23.7	-2.9	9.1	7.6	2.0	0.3	14.7	28.5
1987	9.7	-0.9	-20.6	-3.3	10.3	9.7	4.3	1.1	15.6	29.7
1988	10.2	0.3	-23.4	0.4	11.4	10.4	5.8	-1.6	15.8	24.1
1989	11.4	2.0	-22.2	0.8	11.7	10.1	5.4	5.7	17.0	36.4
1990	11.9	2.0	-22.0	5.6	10.9	13.0	11.4	4.6	21.0	33.2

During ten years (1965-1968, 1984 and 1986-1990) agriculture had a real GDP higher than hypothetical. In the first four years (1965-1968) this was the result of the above-average sectoral efficiency of fixed assets, whose effects prevailed over the negative influence of the structural component. In 1984, 1986 and 1987, however, the positive structural shift exceeded the negative differential shift, while in the last three years the effect of both shifts was positive.

GDP of the manufacturing – which in all years saw a negative structural shift – was higher than hypothetical only in the last four years, that is, from the point when a positive differential shift was high enough to compensate for the negative effect of the structural component. This sector's differential shift was positive as of 1976.

Water management and transport and communication had a smaller real GDP than hypothetical in all years of the surveyed period. For both this was primarily the consequence of a continuously negative structural shift. Its negative influence prevailed even in the years in which these sectors registered a positive differential shift (in the case of water management, from 1965 to 1966 and in 1968, and in the case of transport and communication from 1965-1979, in 1984 and from 1986 to 1987).

Serbia's economy specialized in agriculture, water management, the manufacturing (with the exception of five years: 1979-1984 and 1986-1987) and construction. In 1970 and from 1980 to 1987, agriculture was comparatively bad and was thus characterized by the Type 1 allocation effect; in the other years it was Type 4. Except in 1965, 1966 and 1968 (Type 4 allocation effect) water management was marked as a Type 1 allocation effect sector. The manufacturing, too, was Type 1 up to 1975, while as of 1976 until the end of the surveyed period it was characterized by the Type 4 allocation effect (*Table 2.163*).

Artisanship and catering and tourism were continuously characterized by the Type 3 allocation effect, being comparatively good sectors but ones that Serbia did not specialize in.

Table 2.161 EFFICIENCY IN SERBIA: NET DIFFERENTIAL SHIFT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	2789	281	4	885	-120	-331	267	832	-913	1882
1966	4558	462	3	809	-659	169	269	805	104	2595
1967	4131	424	-4	838	-1094	143	257	920	-247	2894
1968	4282	386	0	784	-1505	287	255	1049	-557	3582
1969	3423	323	-29	553	-1407	-210	238	1155	-619	3419
1970	1923	-64	-38	509	-1805	4	243	1190	-445	2328
1971	1816	40	-44	477	-1593	-613	256	1088	196	2010
1972	1486	18	-45	849	-1172	-727	307	899	-141	1498
1973	2494	162	-53	758	-947	-610	355	558	900	1372
1974	3403	111	-72	679	-762	-600	455	569	1783	1239
1975	5516	185	-73	566	-146	-221	267	528	2456	1955
1976	5887	103	-84	444	599	49	138	494	1654	2491
1977	7451	260	-75	423	1200	518	85	523	2015	2501
1978	8255	83	-68	308	1504	1138	106	483	2084	2617

1979	9126	-92	-75	224	1674	1613	205	266	2710	2601
1980	9065	-18	-57	184	2023	1733	170	-632	3521	2142
1981	10813	-29	-56	133	3285	1348	154	-46	3962	2062
1982	12003	-10	-49	16	3906	1616	125	-37	4123	2313
1983	11385	-95	-47	-43	4642	863	23	-126	3988	2179
1984	12072	-51	-48	-17	5738	991	49	19	3458	1931
1985	11630	-20	-55	-21	5885	782	50	-66	3508	1567
1986	11288	-116	-74	-32	5838	689	40	38	3647	1259
1987	12537	-51	-67	-36	6713	881	79	133	3644	1242
1988	12714	18	-75	5	7456	868	106	-177	3555	957
1989	14729	120	-69	9	7746	830	99	706	3872	1414
1990	13916	116	-63	56	6404	971	194	525	4568	1145

Table 2.162 EFFICIENCY IN SERBIA: ALLOCATION EFFECT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-2063	184	3	-723	-3	-44	-43	-146	-233	-1058
1966	-2155	276	2	-652	-22	9	-40	-131	11	-1609
1967	-2595	244	-3	-680	-42	10	-40	-162	-32	-1890
1968	-3218	213	0	-633	-64	17	-38	-188	-93	-2433
1969	-2936	188	-22	-429	-43	-29	-34	-225	-94	-2249
1970	-2196	-39	-25	-390	-62	0	-34	-225	-58	-1363
1971	-1830	24	-29	-362	-54	-70	-36	-194	12	-1120
1972	-1764	10	-31	-686	-25	-77	-48	-134	-12	-762
1973	-1424	85	-36	-604	-20	-61	-63	-60	11	-676
1974	-1354	56	-51	-531	-16	-56	-96	-56	-55	-548
1975	-1646	93	-58	-431	-4	-11	-60	-43	-125	-1006
1976	-1751	53	-63	-329	10	4	-22	-37	-22	-1343
1977	-1578	134	-56	-309	16	22	-10	-34	-31	-1309
1978	-1611	41	-49	-218	19	17	-14	-27	-21	-1361
1979	-1614	-43	-52	-154	24	-33	-25	-13	-39	-1278
1980	-1255	-8	-42	-125	52	-36	-23	52	-85	-1039
1981	-1113	-14	-41	-88	77	-9	-18	4	-35	-989
1982	-1108	-5	-35	-10	94	-16	-14	3	-16	-1109
1983	-1006	-46	-34	26	78	19	-2	10	-12	-1045
1984	-869	-25	-35	11	90	27	-3	-2	-8	-923

1985	-677	-10	-40	13	100	44	-4	6	-30	-755
1986	-668	-56	-62	19	75	23	-3	-3	-49	-612
1987	-627	-24	-55	22	92	17	-5	-10	-50	-613
1988	-448	8	-60	-3	126	7	-6	14	-63	-472
1989	-702	57	-55	-5	127	2	-6	-56	-78	-689
1990	-618	55	-50	33	102	-5	-12	-39	-95	-541

Table 2.163 EFFICIENCY IN SERBIA: TYPES OF ALLOCATION EFFECT

Year	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	4	4	3	1	1	3	3	1	3
1966	4	4	3	1	4	3	3	4	3
1967	4	1	3	1	4	3	3	1	3
1968	4	4	3	1	4	3	3	1	3
1969	4	1	3	1	1	3	3	1	3
1970	1	1	3	1	4	3	3	1	3
1971	4	1	3	1	1	3	3	4	3
1972	4	1	3	1	1	3	3	1	3
1973	4	1	3	1	1	3	3	4	3
1974	4	1	3	1	1	3	3	3	3
1975	4	1	3	1	1	3	3	3	3
1976	4	1	3	4	4	3	3	3	3
1977	4	1	3	4	4	3	3	3	3
1978	4	1	3	4	4	3	3	3	3
1979	4	1	3	4	3	3	3	3	3
1980	1	1	3	4	3	3	2	3	3
1981	1	1	3	4	3	3	2	3	3
1982	1	1	3	4	3	3	2	3	3
1983	1	1	2	4	4	3	2	3	3
1984	1	1	2	4	4	3	3	3	3
1985	1	1	2	4	4	3	2	3	3
1986	1	1	2	4	4	3	3	3	3
1987	1	1	2	4	4	3	3	3	3
1988	4	1	3	4	4	3	2	3	3
1989	4	1	3	4	4	3	3	3	3
1990	4	1	3	4	3	3	3	3	3

Until 1982 forestry was also marked as a Type 3 allocation effect sector, from 1983 to 1987 it was Type 2, and in 1983 it again became Type 3.

The allocation effects of Type 2 (in 1980-1983, 1985 and 1988) and Type 3 (1965-1979, 1984, 1986, 1987 and 1989-1990) also characterized transport and communication.

Serbia specialized in trade from 1965 to 1973, a sector that was comparatively good in only three years (1966, 1971 and 1973), which was therefore marked as a Type 4 allocation effect sector, while in other years it was comparatively bad (Type 1 allocation effect). As of 1974 until 1990 it was Type 3.

Until 1982 forestry was also a Type 3 allocation effect sector, while as of 1983 until 1987 it was Type 2, only to become Type 3 again in 1988.

Central Serbia

Table 2.164 shows fixed assets efficiency trends in the social sector of the economy of central Serbia.

The economy of central Serbia registered the highest capital-output ratio in 1965, when one dinar in fixed assets “produced” 0.508 dinars of GDP. The year in which the capital-output ratio was the lowest was 1990, at just 0.329.

In the observed period the economy of central Serbia had an average capital-output ratio of 0.374. Much like in the case in Bosnia and Herzegovina, Montenegro and Slovenia, in Serbia, too, the highest and the lowest capital-output ratio were registered in trade and transport and communication, respectively. The average coefficient in trade was 1.371 and in transport and communication 0.178.

Like in Serbia as a whole, central Serbia, too, had an above-average efficiency of fixed assets throughout the surveyed period (*Table 2.168*). In other words, real GDP of this region was continuously higher than hypothetical. This was primarily owed to the above-average sectoral efficiency of fixed assets, i.e. a continuously positive differential shift. On the other hand, the structural shift was negative in 1966, 1974, 1975 and 1979 (*Tables 2.169* and *2.170*).

Table 2.164 CENTRAL SERBIA: EFFICIENCY OF FIXED ASSETS

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	0,508	0,382	0,609	1,183	0,352	1,801	1,587	0,221	2,457	1,719
1966	0,503	0,473	0,508	1,121	0,331	2,085	1,433	0,218	3,261	1,732
1967	0,471	0,355	0,614	1,015	0,300	2,015	1,320	0,229	2,421	1,524
1968	0,462	0,321	0,614	0,925	0,294	1,978	1,178	0,236	2,077	1,563
1969	0,470	0,333	0,561	0,716	0,305	1,686	1,134	0,243	1,922	1,339

1970	0,464	0,272	0,488	0,697	0,304	1,711	1,104	0,249	1,716	0,859
1971	0,444	0,317	0,533	0,681	0,302	1,307	1,043	0,238	1,750	0,705
1972	0,434	0,338	0,509	0,903	0,308	1,190	1,069	0,224	1,552	0,517
1973	0,419	0,313	0,449	0,772	0,307	1,042	1,043	0,207	1,710	0,455
1974	0,426	0,310	0,451	0,691	0,319	1,035	1,030	0,209	1,896	0,426
1975	0,422	0,281	0,365	0,645	0,319	1,134	0,862	0,197	1,910	0,493
1976	0,411	0,263	0,324	0,538	0,315	1,144	0,720	0,191	1,627	0,506
1977	0,419	0,287	0,332	0,539	0,324	1,242	0,671	0,188	1,661	0,490
1978	0,430	0,267	0,304	0,451	0,331	1,348	0,668	0,193	1,689	0,486
1979	0,433	0,279	0,279	0,410	0,332	1,405	0,660	0,190	1,691	0,481
1980	0,426	0,273	0,298	0,399	0,335	1,334	0,625	0,170	1,701	0,420
1981	0,412	0,268	0,409	0,376	0,339	1,149	0,604	0,170	1,544	0,405
1982	0,399	0,300	0,366	0,360	0,329	1,062	0,585	0,159	1,489	0,409
1983	0,379	0,297	0,360	0,329	0,324	0,835	0,541	0,153	1,435	0,384
1984	0,385	0,313	0,341	0,334	0,343	0,807	0,533	0,156	1,367	0,364
1985	0,385	0,299	0,330	0,323	0,348	0,803	0,521	0,155	1,370	0,342
1986	0,388	0,316	0,327	0,342	0,354	0,771	0,464	0,161	1,402	0,307
1987	0,380	0,306	0,341	0,307	0,350	0,782	0,420	0,167	1,316	0,285
1988	0,365	0,286	0,291	0,296	0,342	0,696	0,414	0,166	1,229	0,261
1989	0,368	0,333	0,256	0,276	0,341	0,696	0,426	0,177	1,221	0,255
1990	0,329	0,311	0,234	0,253	0,299	0,635	0,389	0,163	1,136	0,219

Table 2.165 EFFICIENCY IN CENTRAL SERBIA: HIPOTHETICAL GDP

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	26873	1062	93	78	16466	1022	193	6334	1318	306
1966	27797	1074	140	82	17383	912	214	6646	1032	315
1967	29283	1321	107	86	18341	982	219	6491	1401	335
1968	30996	1453	106	91	19345	1063	255	6641	1682	361
1969	33920	1557	129	119	20993	1370	281	6959	2052	461
1970	36941	1651	128	127	22566	1458	306	7428	2561	716
1971	41323	1695	140	131	25341	1712	339	8325	2756	884
1972	43702	1677	155	99	26158	1821	348	9032	3248	1165
1973	45899	1727	168	114	27148	1982	363	10139	2955	1302
1974	50096	1885	181	137	29538	2149	401	11348	910	1547

1975	51325	1856	199	145	30734	2146	439	11618	2832	1356
1976	52985	2079	235	165	31340	2331	528	11751	3197	1358
1977	56724	2178	283	180	33491	2373	609	12713	3391	1507
1978	61837	2348	312	215	36579	2569	663	13802	3721	1627
1979	66323	2369	322	247	39675	2705	738	14506	3993	1768
1980	67593	2426	379	237	40803	2773	773	14334	4033	1835
1981	67148	2394	269	247	40444	2772	780	14350	4094	1798
1982	66490	2363	286	271	40075	2706	801	14102	4082	1803
1983	65424	2356	280	269	39230	2710	834	14042	3956	1747
1984	66513	2414	292	273	39779	2759	868	14383	3985	1760
1985	67493	2413	297	278	40275	2810	900	14750	3997	1773
1986	69315	2565	308	289	41376	2846	940	15173	4034	1785
1987	67913	2518	299	290	40520	2783	927	14920	3918	1739
1988	67020	2493	316	295	40180	2715	915	14555	3837	1714
1989	67094	2520	335	300	40014	2718	908	14693	3855	1751
1990	60839	2298	301	269	35942	2451	818	13576	3517	1665

Table 2.166 EFFICIENCY IN CENTRAL SERBIA: STRUCTURAL SHIFT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	1090	-125	-68	33	-3186	2612	186	-3841	5335	144
1966	-750	-33	-100	34	-3613	2285	186	-3978	4371	98
1967	37	-64	-76	30	-4179	2571	183	-3674	5206	39
1968	356	-153	-78	24	-4330	2711	196	-3642	5605	24
1969	1359	-228	-96	21	-4697	3301	217	-3745	6569	18
1970	1873	-396	-99	24	-4866	3410	242	-3871	7542	-112
1971	1587	-212	-107	23	-5501	3458	252	-4272	8137	-192
1972	1941	-270	-119	14	-5185	3366	268	-4659	8863	-337
1973	789	-220	-127	14	-5153	3135	267	-5074	8357	-410
1974	-123	-210	-136	8	-5196	3314	253	-5645	8029	-541
1975	-453	-353	-155	8	-5294	3647	322	-5898	7741	-472
1976	425	-269	-179	7	-5462	4037	398	-5889	8290	-508
1977	128	-261	-212	11	-5688	4196	388	-6567	8809	-550
1978	178	-422	-237	-5	-6500	4746	365	-7006	9834	-596
1979	-17	-380	-246	-11	-7188	5183	292	-7433	10382	-616

1980	52	-378	-287	-19	-6926	5138	299	-7322	10191	-644
1981	361	-330	-199	-9	-5878	4687	302	-7400	9802	-614
1982	253	-79	-210	3	-5768	4023	337	-7432	9965	-585
1983	279	-55	-202	2	-4963	3236	361	-7231	9657	-526
1984	213	71	-214	4	-4136	2876	351	-7362	9146	-524
1985	282	-66	-217	1	-3650	2702	366	-7462	9125	-517
1986	384	63	-233	-4	-3427	2568	213	-7554	9378	-619
1987	428	40	-224	-7	-2739	2422	116	-7072	8566	-675
1988	342	59	-235	-4	-2323	1989	127	-6734	8076	-613
1989	453	113	-252	-16	-1793	1878	143	-6831	8043	-832
1990	272	259	-223	-27	-1798	1575	89	-6163	7327	-767

Table 2.167 EFFICIENCY IN CENTRAL SERBIA: DIFFERENTIAL SHIFT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	1659	-57	98	89	-709	355	286	540	368	689
1966	3898	85	117	87	-1051	1010	278	534	2044	793
1967	2480	-175	120	86	-1467	1015	265	607	1223	805
1968	2288	-205	125	83	-1666	1163	254	677	916	940
1969	1984	-118	136	59	-1358	727	246	740	589	963
1970	1409	-203	117	57	-1621	981	243	790	206	839
1971	489	-212	143	57	-1779	117	244	634	505	780
1972	195	-37	155	102	-1535	42	282	501	58	627
1973	1259	-160	147	92	-1203	29	313	174	1282	585
1974	2139	-249	155	85	-1358	-40	354	72	2518	602
1975.	3676	-192	139	83	-775	332	192	55	3043	798
1976.	3821	-373	144	61	91	645	74	29	2191	958
1977.	5426	-281	174	63	610	1145	73	122	2545	974
1978.	6795	-302	171	42	1277	1657	118	97	2718	1018
1979.	8111	-277	157	27	1728	1967	233	83	3140	1052
1980.	8861	-289	207	33	2473	1916	211	-550	4003	857
1981.	9369	-286	235	20	3480	1384	226	-179	3649	839
1982.	10283	-224	229	10	4041	1629	225	-170	3621	923
1983.	9970	-167	230	-1	4488	957	182	-246	3702	824
1984.	11042	-193	224	-1	5785	1124	184	-193	3404	708

1985.	11606	-141	219	-4	6113	1380	165	-315	3593	597
1986.	11927	-169	230	15	6418	1242	169	-211	3737	496
1987.	12798	-136	245	-3	6721	1634	179	-41	3707	492
1988.	13011	-209	221	-4	7239	1499	202	111	3581	369
1989.	15277	188	204	-6	7534	1750	248	887	3893	579
1990.	14856	155	190	15	6593	1874	300	948	4296	485

Table 2.168 EFFICIENCY IN CENTRAL SERBIA:
RATIO OF HIPOTHETICAL AND REAL GDP

In %

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	90.7	120.6	75.8	39.0	131.0	25.6	29.1	208.9	18.8	26.8
1966	89.8	95.5	88.9	40.3	136.7	21.7	31.5	207.6	13.9	26.1
1967	92.1	122.1	70.6	42.7	144.5	21.5	32.8	189.6	17.9	28.4
1968	92.1	132.7	69.3	46.0	144.9	21.5	36.1	180.7	20.5	27.3
1969	91.0	128.6	76.2	59.8	140.5	25.4	37.7	176.0	22.3	32.0
1970	91.8	157.0	87.3	61.2	140.3	24.9	38.6	170.9	24.8	49.6
1971	95.2	133.3	79.4	62.2	140.3	32.4	40.6	177.6	24.2	60.0
1972	95.3	122.4	81.3	45.9	134.6	34.8	38.8	185.3	26.7	80.1
1973	95.7	128.3	89.4	52.0	130.6	38.5	38.5	193.5	23.5	88.1
1974	96.1	132.2	90.9	59.4	128.5	39.6	39.8	196.5	21.6	96.2
1975	94.1	141.5	108.7	61.6	124.6	35.0	46.1	201.2	20.8	80.6
1976	92.6	144.7	117.5	70.7	120.7	33.2	52.8	199.5	23.4	75.1
1977	91.1	133.1	115.1	70.8	117.9	30.8	56.9	202.8	23.0	78.0
1978	89.9	144.6	127.0	85.5	116.7	28.6	57.8	200.2	22.9	79.4
1979	89.1	138.3	138.3	94.0	116.0	27.4	58.4	202.7	22.8	80.2
1980	88.4	137.9	126.5	94.3	112.2	28.2	60.2	221.9	22.1	89.6
1981	87.3	134.6	88.2	95.7	106.3	31.3	59.6	211.9	23.3	88.9
1982	86.3	114.7	93.9	95.6	104.5	32.4	58.8	217.0	23.1	84.2
1983	86.5	110.4	91.0	99.6	101.2	39.3	60.6	213.9	22.8	85.4
1984	85.5	105.3	96.7	98.7	96.0	40.8	61.9	210.6	24.1	90.5
1985	85.0	109.4	99.3	101.3	94.2	40.8	62.9	211.5	23.9	95.7
1986	84.9	104.3	100.8	96.5	93.3	42.8	71.1	204.8	23.5	107.4
1987	83.7	104.0	93.4	103.8	91.1	40.7	75.9	191.1	24.2	111.8

1988	83.4	106.4	104.5	102.8	89.1	43.8	73.6	183.5	24.8	116.5
1989	81.0	89.3	116.6	107.9	87.5	42.8	69.9	167.9	24.4	116.8
1990	80.1	84.7	112.7	104.3	88.2	41.5	67.8	162.4	23.2	120.4

Table 2.169 EFFICIENCY IN CENTRAL SERBIA:
RATIO OF STRUCTURAL SHIFT AND REAL GDP

In %

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	3.7	-14.1	-55.4	16.7	-25.3	65.5	27.9	-126.7	76.0	12.7
1966	-2.4	-3.0	-63.8	16.9	-28.4	54.3	27.4	-124.2	58.7	8.1
1967	0.1	-5.9	-50.3	14.9	-32.9	56.3	27.5	-107.3	66.5	3.3
1968	1.1	-14.0	-51.2	11.9	-32.4	54.9	27.9	-99.1	68.3	1.8
1969	3.6	-18.8	-56.8	10.6	-31.4	61.2	29.1	-94.7	71.3	1.2
1970	4.7	-37.7	-67.0	11.4	-30.3	58.3	30.6	-89.1	73.2	-7.8
1971	3.7	-16.6	-60.3	11.0	-30.5	65.4	30.2	-91.2	71.4	-13.0
1972	4.2	-19.7	-62.4	6.7	-26.7	64.4	29.9	-95.6	72.8	-23.2
1973	1.6	-16.3	-67.8	6.3	-24.8	60.9	28.4	-96.8	66.4	-27.7
1974	-0.2	-14.7	-68.6	3.5	-22.6	61.1	25.1	-97.7	59.7	-33.6
1975	-0.8	-26.9	-84.8	3.3	-21.5	59.5	33.8	-102.1	56.9	-28.0
1976	0.7	-18.7	-89.7	3.1	-21.0	57.6	39.8	-100.0	60.6	-28.1
1977	0.2	-15.9	-86.0	4.3	-20.0	54.4	36.3	-104.8	59.7	-28.5
1978	0.3	-26.0	-96.4	-2.1	-20.7	52.9	31.8	-101.6	60.4	-29.1
1979	-0.0	-22.2	-105.6	-4.3	-21.0	52.6	23.1	-103.9	59.3	-27.9
1980	0.1	-21.5	-95.5	-7.4	-19.1	52.3	23.3	-113.3	55.9	-31.4
1981	0.5	-18.5	-65.3	-3.3	-15.4	53.0	23.1	-109.3	55.9	-30.4
1982	0.3	-3.9	-68.9	1.0	-15.0	48.1	24.7	-114.3	56.4	-27.3
1983	0.4	-2.6	-65.6	0.6	-12.8	46.9	26.2	-110.1	55.8	-25.7
1984	0.3	3.1	-70.9	1.5	-10.0	42.6	25.0	-107.8	55.3	-26.9
1985	0.4	-3.0	-72.7	0.2	-8.5	39.2	25.6	-107.0	54.6	-27.9
1986	0.5	2.6	-76.4	-1.5	-7.7	38.6	16.1	-102.0	54.7	-37.3
1987	0.5	1.6	-70.0	-2.6	-6.2	35.4	9.5	-90.6	52.9	-43.3
1988	0.4	2.5	-77.8	-1.4	-5.2	32.1	10.2	-84.9	52.1	-41.7
1989	0.5	4.0	-87.7	-5.7	-3.9	29.6	11.0	-78.1	50.9	-55.5
1990	0.4	9.6	-83.7	-10.3	-4.4	26.7	7.4	-73.7	48.4	-55.4

Table 2.170 EFFICIENCY IN CENTRAL SERBIA:
RATIO OF DIFFERENTIAL SHIFT AND REAL GDP

In %

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	5.6	-6.5	79.7	44.4	-5.6	8.9	43.0	17.8	5.2	60.5
1966	12.6	7.5	74.8	42.8	-8.3	24.0	41.1	16.7	27.4	65.8
1967	7.8	-16.2	79.7	42.4	-11.6	22.2	39.7	17.7	15.6	68.3
1968	6.8	-18.7	81.9	42.1	-12.5	23.6	36.0	18.4	11.2	71.0
1969	5.3	-9.7	80.6	29.6	-9.1	13.5	33.1	18.7	6.4	66.8
1970	3.5	-19.3	79.7	27.4	-10.1	16.8	30.8	18.2	2.0	58.1
1971	1.1	-16.7	81.0	26.8	-9.8	2.2	29.2	13.5	4.4	53.0
1972	0.4	-2.7	81.1	47.5	-7.9	0.8	31.4	10.3	0.5	43.1
1973	2.6	-11.9	78.4	41.7	-5.8	0.6	33.2	3.3	10.2	39.6
1974	4.1	-17.5	77.7	37.1	-5.9	-0.7	35.1	1.2	18.7	37.4
1975	6.7	-14.6	76.0	35.1	-3.1	5.4	20.1	1.0	22.3	47.4
1976	6.7	-25.9	72.1	26.2	0.4	9.2	7.4	0.5	16.0	53.0
1977	8.7	-17.2	70.9	24.9	2.1	14.8	6.8	1.9	17.3	50.4
1978	9.9	-18.6	69.4	16.5	4.1	18.5	10.3	1.4	16.7	49.7
1979	10.9	-16.2	67.3	10.4	5.1	20.0	18.5	1.2	17.9	47.7
1980	11.6	-16.4	69.1	13.1	6.8	19.5	16.5	-8.5	22.0	41.8
1981	12.2	-16.1	77.1	7.6	9.1	15.7	17.3	-2.6	20.8	41.5
1982	13.3	-10.9	75.1	3.4	10.5	19.5	16.5	-2.6	20.5	43.1
1983	13.2	-7.8	74.6	-0.2	11.6	13.9	13.2	-3.8	21.4	40.3
1984	14.2	-8.4	74.1	-0.2	14.0	16.6	13.1	-2.8	20.6	36.4
1985	14.6	-6.4	73.4	-1.5	14.3	20.0	11.5	-4.5	21.5	32.2
1986	14.6	-6.9	75.6	5.0	14.5	18.7	12.8	-2.8	21.8	29.9
1987	15.8	-5.6	76.6	-1.1	15.1	23.9	14.6	-0.5	22.9	31.6
1988	16.2	-8.9	73.3	-1.4	16.1	24.2	16.2	1.4	23.1	25.1
1989	18.4	6.7	71.2	-2.2	16.5	27.6	19.1	10.1	24.7	38.6
1990	19.6	5.7	71.0	6.0	16.2	31.8	24.9	11.3	28.4	35.0

Construction, artisanship and trade were sectors with real GDP continuously higher than hypothetical GDP. In all three sectors this was owed to the cumulative positive effect of both shifts (the exception was construction in 1974, when its differential shift was negative).

Water management and catering and tourism also had an above-average sectoral efficiency of fixed assets, i.e. a positive differential shift. From 1975 to 1980, and in 1986 and 1988 in the case of water management, and from 1986 to 1988, however, it wasn't big enough to annul the negative effect of the structural component.

In four years (1985, 1987, 1988 and 1990) forestry's real GDP was smaller than hypothetical. In 1985, that was the result of a negative differential shift prevailing over the positive structural shift, and in 1987 and 1988 of the cumulative negative effect of both shifts. The sector's differential shift was negative in five years – 1983-1985, 1987 and 1988.

Although the manufacturing's fixed assets having above-average sectoral efficiency as of 1976, its real GDP was above hypothetical only in the last seven years (1984-1990). That was the point when the positive differential shift reached a level enabling it to prevail over the negative effect of the structural component.

GDP of agriculture was above hypothetical in only three years (1986-1989 and in 1990). The influence of a continuously negative structural shift in transport and communication was such that even in the years that registered a positive differential shift (1965-1979 and 1988-1990) it annulled that shift's effect, leading to the sector's real GDP being below hypothetical in every year of the surveyed period.

Table 2.171 EFFICIENCY IN CENTRAL SERBIA: NET DIFFERENTIAL SHIFT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	3193	-80	351	406	-638	307	395	589	310	1553
1966	6067	129	317	382	-927	1015	359	561	2221	2008
1967	4716	-235	460	382	-1293	1002	345	657	1180	2218
1968	5039	-264	531	371	-1468	1166	311	735	845	2812
1969	4229	-160	582	215	-1209	639	290	808	512	2551
1970	3094	-278	530	203	-1449	913	278	855	171	1871
1971	2151	-306	707	205	-1594	106	281	669	445	1639
1972	1841	-55	717	518	-1402	39	336	506	49	1133
1973	2520	-245	649	423	-1113	26	386	165	1214	1015
1974	3520	-379	696	365	-1257	-37	449	66	2644	973
1975	5285	-296	583	336	-716	317	243	50	3282	1485
1976	5085	-536	524	217	86	590	81	26	2192	1906
1977	6600	-402	560	217	575	1100	78	109	2550	1814
1978	7837	-432	522	128	1209	1615	132	86	2707	1869
1979	9063	-404	482	77	1641	1959	271	73	3129	1835
1980	9657	-413	531	96	2329	1888	243	-508	4043	1448

1981	10201	-409	808	54	3287	1346	259	-165	3611	1411
1982	11037	-317	724	24	3819	1600	254	-158	3551	1541
1983	10650	-235	709	-1	4280	904	196	-226	3640	1382
1984	11527	-275	670	-1	5520	1059	196	-177	3351	1184
1985	12007	-201	653	-11	5834	1316	174	-288	3525	1005
1986	12360	-234	745	38	6132	1188	175	-193	3673	836
1987	13245	-187	799	-8	6421	1595	183	-37	3638	841
1988	13212	-289	669	-10	6881	1485	207	102	3537	629
1989	15617	260	578	-15	7167	1741	255	815	3848	967
1990	15158	216	537	37	6294	1881	310	865	4241	777

Table 2.172 EFFICIENCY IN CENTRAL SERBIA: ALLOCATION EFFECT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-1534	23	-253	-317	-71	49	-110	-50	58	-864
1966	-2169	-45	-200	-295	-125	-5	-80	-27	-178	-1215
1967	-2236	59	-340	-296	-174	14	-79	-50	43	-1413
1968	-2750	60	-405	-288	-198	-3	-58	-58	72	-1872
1969	-2244	43	-446	-156	-150	87	-44	-68	77	-1588
1970	-1685	75	-413	-146	-172	68	-35	-66	35	-1032
1971	-1663	94	-563	-148	-185	11	-38	-35	60	-859
1972	-1646	19	-562	-416	-133	3	-54	-5	9	-506
1973	-1262	85	-502	-331	-91	3	-73	10	69	-430
1974	-1381	130	-541	-279	-100	-3	-95	6	-126	-371
1975	-1609	104	-444	-254	-59	15	-51	6	-239	-687
1976	-1264	163	-380	-156	6	55	-7	3	-1	-947
1977	-1174	122	-386	-154	35	46	-5	13	-5	-839
1978	-1042	130	-351	-87	67	42	-13	11	11	-851
1979	-952	127	-326	-50	87	9	-38	9	11	-782
1980	-797	124	-324	-63	144	28	-32	-42	-40	-591
1981	-832	123	-572	-34	192	39	-32	-14	39	-572
1982	-754	93	-495	-15	223	29	-29	-12	70	-617
1983	-680	68	-479	1	208	54	-14	-21	61	-558
1984	-484	82	-446	1	265	65	-11	-16	53	-476
1985	-401	60	-433	7	279	64	-9	-27	67	-408

1986	-432	64	-514	-22	286	54	-6	-18	64	-340
1987	-447	51	-554	5	300	40	-5	-4	69	-349
1988	-201	80	-448	6	358	15	-5	9	44	-260
1989	-340	-72	-374	9	367	9	-8	72	45	-388
1990	-302	-60	-348	-22	299	-7	-10	83	55	-292

Table 2.173 EFFICIENCY IN CENTRAL SERBIA:
TYPES OF ALLOCATION EFFECT

Year	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	2	3	3	1	4	3	3	4	3
1966	3	3	3	1	3	3	3	3	3
1967	2	3	3	1	4	3	3	4	3
1968	2	3	3	1	3	3	3	4	3
1969	2	3	3	1	4	3	3	4	3
1970	2	3	3	1	4	3	3	4	3
1971	2	3	3	1	4	3	3	4	3
1972	2	3	3	1	4	3	3	4	3
1973	2	3	3	1	4	3	4	4	3
1974	2	3	3	1	1	3	4	3	3
1975	2	3	3	1	4	3	4	3	3
1976	2	3	3	4	4	3	4	3	3
1977	2	3	3	4	4	3	4	3	3
1978	2	3	3	4	4	3	4	4	3
1979	2	3	3	4	4	3	4	4	3
1980	2	3	3	4	4	3	1	3	3
1981	2	3	3	4	4	3	1	4	3
1982	2	3	3	4	4	3	1	4	3
1983	2	3	2	4	4	3	1	4	3
1984	2	3	2	4	4	3	1	4	3
1985	2	3	2	4	4	3	1	4	3
1986	2	3	3	4	4	3	1	4	3
1987	2	3	2	4	4	3	1	4	3
1988	2	3	2	4	4	3	1	4	3
1989	3	3	2	4	4	3	4	4	3
1990	3	3	3	4	3	3	4	4	3

In all of the years of the surveyed period, Serbia's economy specialized only in the manufacturing, and in a prevailing number of years (with the exception of 1966, 1968 and 1990 – Type 3 allocation effect) in construction. Up until 1975, the manufacturing was a comparatively bad sector (Type 1 allocation effect), becoming as of 1976 comparatively good (Type 4 allocation effect). In all of the other (unmentioned) years (except in 1974, when it was comparatively bad – Type 4 allocation effect) construction appeared as a comparatively good sector (Type 4 allocation effect) – see *Table 2.173*.

Water management, artisanship, catering and tourism, agriculture and forestry were non-specialized in sectors throughout: the first three were comparatively good, classifying them as Type 3 sectors. Agriculture belonged to the same group only in 1966, 1989 and 1990, while in all other years it was Type 2. Forestry was of the Type 2 allocation effect only in six years (1983-1985 and 1987-1989), whereas in the remaining years it was characterized by the Type 3 allocation effect.

Trade was a continuously comparatively good sector. Serbia did not specialize in it (Type 3 allocation effect) in only six years (1966, 1974-1977 and in 1980), while in all other years it was marked as a Type 4 allocation effect sector.

Transport and communication were comparatively good but not-specialized in from 1965 to 1972 (Type 3 allocation effect), from 1973 to 1979 and in 1989 and 1990 the sector was comparatively good and specialized in (Type 4 allocation effect), and at the end of the surveyed period (1983-1990) it was comparatively bad and specialized in, which is the worst variant – Type 1 allocation effect.

Kosovo and Metohia

Table 2.174 presents data on the efficiency of fixed assets of the Kosovo and Metohia economy's social sector. The data shows that in Kosovo and Metohia as well the efficiency of fixed assets constantly dropped: the maximal capital-output ratio was in 1965 – 0.354, and the minimal in 1990 – 0.145.

Table 2.174 KOSOVO AND METOHIA : EFFICIENCY OF FIXED ASSETS

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	0,354	0,377	-	2,600	0,257	1,415	0,619	0,132	2,485	1,014
1966	0,354	0,339	-	1,857	0,261	1,243	0,571	0,138	2,420	0,936
1967	0,317	0,322	0,238	1,625	0,225	1,062	0,432	0,138	2,029	0,885
1968	0,293	0,238	0,184	1,087	0,210	1,004	0,396	0,147	1,696	0,912
1969	0,303	0,249	0,184	1,042	0,209	1,159	0,421	0,155	1,788	0,846
1970	0,299	0,202	0,183	1,038	0,209	1,225	0,418	0,164	1,756	0,552

1971	0,282	0,188	0,139	0,900	0,191	1,243	0,419	0,162	1,754	0,539
1972	0,286	0,149	0,107	0,933	0,204	1,152	0,456	0,165	1,729	0,551
1973	0,269	0,133	0,099	0,700	0,190	0,973	0,425	0,166	1,569	0,538
1974	0,291	0,155	0,113	0,600	0,210	1,066	0,424	0,170	1,543	0,553
1975	0,295	0,192	0,138	0,536	0,216	1,144	0,387	0,164	1,460	0,539
1976	0,273	0,188	0,053	0,508	0,204	0,902	0,371	0,161	1,452	0,581
1977	0,268	0,153	0,122	0,516	0,209	0,968	0,389	0,139	1,319	0,445
1978	0,263	0,231	0,141	0,438	0,198	0,916	0,292	0,147	1,257	0,392
1979	0,259	0,179	0,184	0,427	0,188	1,125	0,306	0,134	1,317	0,340
1980	0,258	0,254	0,298	0,375	0,177	1,187	0,288	0,117	1,236	0,307
1981	0,255	0,228	0,274	0,367	0,180	1,087	0,297	0,130	1,172	0,307
1982	0,242	0,291	0,245	0,270	0,170	0,871	0,260	0,126	1,145	0,309
1983	0,224	0,249	0,230	0,237	0,170	0,675	0,245	0,118	0,999	0,291
1984	0,227	0,267	0,225	0,234	0,180	0,643	0,255	0,117	0,888	0,255
1985	0,239	0,244	0,159	0,249	0,207	0,397	0,263	0,131	0,832	0,235
1986	0,230	0,373	0,018	0,181	0,204	0,512	0,250	0,129	0,827	0,188
1987	0,224	0,378	0,019	0,213	0,204	0,355	0,226	0,133	0,792	0,186
1988	0,213	0,398	0,019	0,203	0,195	0,299	0,203	0,108	0,733	0,221
1989	0,198	0,367	0,023	0,183	0,184	0,277	0,199	0,093	0,677	0,188
1990	0,145	0,289	0,021	0,120	0,133	0,193	0,148	0,061	0,519	0,161

Table 2.175 EFFICIENCY IN KOSOVO AND METOHIA:
HIPOTHETICAL GDP

1972 prices

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	2854	235	-	5	1841	92	22	555	77	27
1966	3077	320	-	6	1951	110	23	550	85	30
1967	3320	310	35	7	2148	117	27	542	105	29
1968	3610	343	37	10	2372	125	30	534	129	31
1969	3856	404	44	10	2512	134	30	550	134	37
1970	4276	438	40	11	2838	144	32	565	152	55
1971	4884	444	49	13	3323	164	36	633	163	59
1972	5127	462	51	12	3509	183	35	639	173	63
1973	5389	482	53	16	3664	219	37	662	187	69

1974	5911	512	58	20	4043	251	41	700	210	77
1975	6237	533	60	22	4293	257	45	729	218	80
1976	6493	536	58	22	4543	272	47	727	210	78
1977	7239	565	69	24	4999	282	49	897	246	106
1978	7848	566	60	28	5467	279	71	959	288	130
1979	8396	566	52	29	5886	274	84	1005	311	190
1980	8591	561	53	30	5962	300	83	1070	347	184
1981	8754	540	53	32	6080	312	82	1109	361	184
1982	8592	520	53	49	5962	310	82	1083	355	178
1983	8525	495	51	47	5938	301	84	1077	358	172
1984	8571	491	53	49	5921	304	83	1116	377	177
1985	8866	491	64	47	5943	505	86	1149	398	183
1986	9653	512	573	62	6195	366	82	1262	416	186
1987	9586	504	558	60	6158	364	82	1261	413	186
1988	9439	514	536	58	6054	358	86	1243	408	181
1989	9368	528	525	59	5989	351	85	1246	405	180
1990	8383	472	464	53	5365	314	77	1119	359	161

Table 2.176 EFFICIENCY IN KOSOVO AND METOHIA:
STRUCTURAL SHIFT

										In %
Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965.	-138	-28	-	2	-356	235	21	-337	312	13
1966.	-77	-10	-	3	-406	276	20	-329	360	9
1962.	-110	-15	-25	2	-489	306	23	-307	391	3
1968.	-111	-36	-27	3	-531	318	23	-293	430	2
1969.	-172	-59	-33	2	-562	324	23	-296	428	1
1970.	-237	-105	-30	2	-612	337	26	-294	448	-9
1971.	-309	-55	-37	2	-721	332	27	-325	482	-13
1972.	-319	-74	-39	2	-695	338	27	-330	471	-18
1973.	-246	-61	-40	2	-696	346	27	-331	529	-22
1974.	-195	-57	-44	1	-711	386	26	-348	579	-27
1975.	-220	-101	-47	1	-739	436	33	-370	595	-28
1976.	-248	-69	-44	1	-792	471	36	-364	543	-29

1977	-300	-68	-52	1	-849	498	31	-464	640	-39
1978	-338	-102	-46	-1	-971	515	39	-487	762	-48
1979	-413	-91	-40	-1	-1066	525	33	-515	808	-66
1980	-289	-87	-40	-2	-1012	556	32	-547	877	-65
1981	-208	-74	-39	-1	-884	527	32	-572	865	-63
1982	-182	-17	-39	0	-858	461	35	-571	866	-58
1983	-135	-12	-37	0	-751	359	37	-555	875	-52
1984	-48	14	-39	1	-616	316	33	-571	865	-53
1985	196	-13	-47	0	-539	486	35	-581	909	-53
1986	-313	13	-434	-1	-513	330	18	-628	967	-65
1987	-269	8	-418	-2	-416	317	10	-598	902	-72
1988	-246	12	-399	-1	-350	262	12	-575	858	-65
1989	-207	24	-395	-3	-268	243	13	-579	844	-86
1990	-190	53	-345	-5	-268	202	8	-508	748	-74

Table 2.177 EFFICIENCY IN KOSOVO AND METOHIA : DIFFERENTIAL SHIFT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-526	-16	-	19	-457	-45	-13	-60	26	20
1966	-590	-70	-	17	-420	-83	-14	-53	10	23
1967	-781	-65	9	17	-544	-137	-23	-63	-3	27
1968	-1011	-115	6	13	-672	-149	-25	-57	-45	33
1969	-952	-110	8	13	-721	-94	-24	-55	-3	35
1970	-1035	-125	8	14	-836	-67	-26	-53	27	25
1971	-1323	-191	4	12	-1103	-13	-27	-65	31	29
1972	-1269	-221	1	14	-1088	-12	-24	-54	77	39
1973	-1535	-261	0	10	-1230	-34	-25	-56	15	45
1974	-1525	-261	2	8	-1257	14	-24	-62	1	54
1975	-1378	-174	8	7	-1215	47	-34	-58	-13	56
1976	-1584	-202	-6	7	-1309	-98	-37	-56	47	70
1977	-1857	-272	5	7	-1414	-66	-31	-107	-36	56
1978	-2158	-125	8	4	-1686	-132	-56	-108	-112	49
1979	-2349	-212	13	4	-1950	1	-50	-141	-57	44
1980	-2419	-95	29	2	-2149	91	-52	-191	-85	31
1981	-2355	-124	26	2	-2161	102	-46	-138	-51	36

1982	-2358	-63	24	-11	-2154	14	-55	-114	-39	40
1983	-2557	-108	22	-13	-2115	-41	-58	-135	-141	33
1984	-2618	-108	22	-15	-2073	-28	-52	-150	-226	13
1985	-2584	-111	14	-11	-1642	-378	-52	-109	-296	1
1986	-2600	55	-107	-27	-1859	-129	-38	-140	-340	-15
1987	-2579	86	-107	-18	-1798	-276	-34	-138	-289	-5
1988	-2604	145	-103	-19	-1821	-268	-40	-228	-285	15
1989	-2932	98	-90	-20	-2023	-268	-42	-278	-330	19
1990	-3580	-9	-83	-24	-2395	-286	-42	-353	-400	11

Table 2.178 EFFICIENCY IN KOSOVO AND METOHIA:
RATIO OF HIPOTHETICAL AND REAL GDP

										In %
Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	130.4	122.5	-	17.7	179.2	32.6	74.5	350.2	18.6	45.5
1966	127.7	133.2	-	24.3	173.3	36.4	79.2	328.3	18.7	48.3
1967	136.7	134.5	182.4	26.7	192.8	40.8	100.4	314.2	21.4	48.9
1968	145.1	179.0	231.5	39.2	202.9	42.4	107.6	290.4	25.1	46.7
1969	141.1	171.8	232.1	41.1	204.4	36.9	101.7	277.0	23.9	50.6
1970	142.4	210.6	233.3	41.1	204.2	34.8	101.9	260.3	24.3	77.3
1971	150.2	224.7	304.1	47.0	221.7	34.0	101.0	260.6	24.1	78.5
1972	144.9	277.8	388.7	44.4	203.4	36.0	90.7	250.5	24.0	75.1
1973	149.4	300.9	404.3	57.3	210.7	41.2	94.4	241.0	25.6	74.5
1974	141.0	264.2	361.3	68.3	194.9	38.5	96.6	241.7	26.6	74.1
1975	134.4	206.8	287.5	74.1	183.6	34.7	102.7	242.2	27.2	73.7
1976	139.3	202.2	722.7	74.8	186.0	42.2	102.5	236.9	26.2	65.4
1977	142.4	250.2	314.3	74.1	182.7	39.4	98.2	274.8	29.0	85.8
1978	146.6	167.0	273.8	88.1	194.6	42.1	132.1	263.3	30.7	98.6
1979	149.0	215.1	209.7	90.4	205.1	34.3	125.8	288.0	29.3	113.3
1980	146.0	148.1	126.3	100.4	212.9	31.7	130.8	322.3	30.5	122.7
1981	141.4	158.2	131.5	98.0	200.3	33.2	121.2	278.1	30.7	117.2
1982	142.0	118.2	140.5	127.6	202.1	39.5	132.6	272.1	30.0	111.3
1983	146.2	131.8	142.8	138.3	193.3	48.6	134.0	278.3	32.8	112.7
1984	145.2	123.5	146.4	141.0	183.2	51.3	129.3	282.5	37.1	129.3

1985	136.9	134.0	206.3	131.3	158.0	82.4	124.7	250.3	39.4	139.7
1986	143.2	88.4	1791.3	181.9	162.0	64.5	131.8	255.4	39.9	175.4
1987	142.3	84.3	1692.0	149.2	156.1	89.7	141.1	240.2	40.2	171.0
1988	143.2	76.6	1577.8	149.9	155.9	101.7	150.1	282.6	41.6	137.5
1989	150.4	81.3	1312.3	163.0	162.0	107.7	149.5	320.3	44.0	158.1
1990	181.7	91.4	1255.2	219.9	198.6	136.5	178.0	433.7	50.8	164.2

Table 2.179 EFFICIENCY IN KOSOVO AND METOHIA:
RATIO OF STRUCTURAL SHIFT AND REAL GDP

In %

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-6.3	-14.4	-	7.6	-34.7	83.3	71.6	-212.4	75.1	21.5
1966	-3.2	-4.2	-	10.2	-36.0	91.1	68.8	-196.5	79.1	15.1
1967	-4.5	-6.5	-130.1	9.3	-43.9	106.8	84.0	-177.8	79.3	5.7
1968	-4.5	-18.9	-171.0	10.1	-45.4	108.2	83.0	-159.3	83.6	3.1
1969	-6.3	-25.2	-172.9	7.3	-45.7	88.9	78.5	-149.1	76.6	2.0
1970	-7.9	-50.5	-179.1	7.6	-44.0	81.4	80.8	-135.6	71.5	-12.1
1971	-9.5	-28.1	-231.2	8.3	-48.1	68.7	75.3	-133.7	71.2	-17.0
1972	-9.0	-44.8	-298.1	6.5	-40.3	66.5	69.9	-129.2	65.4	-21.7
1973	-6.8	-38.3	-306.6	7.0	-40.0	65.2	69.6	-120.6	72.3	-23.5
1974	-4.6	-29.4	-272.7	4.1	-34.3	59.3	60.8	-120.2	73.3	-25.9
1975	-4.7	-39.3	-224.2	3.9	-31.6	59.0	75.4	-123.0	74.4	-25.6
1976	-5.3	-26.2	-551.3	3.3	-32.4	73.0	77.3	-118.7	67.9	-24.5
1977	-5.9	-30.0	-234.9	4.5	-31.0	69.7	62.6	-141.9	75.2	-31.3
1978	-6.3	-30.0	-207.9	-2.1	-34.6	77.8	72.7	-133.6	81.2	-36.1
1979	-7.3	-34.5	-160.1	-4.2	-37.2	65.7	49.8	-147.6	76.1	-39.5
1980	-4.9	-23.1	-95.5	-7.8	-36.1	58.7	50.6	-164.6	77.0	-43.1
1981	-3.4	-21.8	-97.4	-3.4	-29.1	56.0	46.9	-143.4	73.6	-40.0
1982	-3.0	-4.0	-103.2	1.3	-29.1	58.7	55.7	-143.4	73.3	-36.1
1983	-2.3	-3.1	-103.0	0.8	-24.5	58.0	58.0	-143.3	80.1	-33.9
1984	-0.8	3.6	-107.3	2.2	-19.0	53.5	52.3	-144.6	85.2	-38.5
1985	3.0	3.7	-151.0	0.3	-14.3	79.2	50.7	-126.6	89.9	-40.7
1986	-4.6	2.2	-1357.1	-2.8	-13.4	58.2	29.8	-127.1	92.7	-60.9
1987	-4.0	1.3	-1267.4	-3.8	-10.6	78.1	17.7	-113.8	87.9	-66.3

1988	-3.7	1.8	-1174.7	-2.1	-9.0	74.5	20.8	-130.7	87.5	-49.1
1989	-3.3	3.6	-987.6	-8.7	-7.3	74.4	23.6	-148.9	91.9	-75.1
1990	-4.1	10.3	-932.1	-21.7	-9.9	87.7	19.3	-196.8	105.9	-75.6

Table 2.180 EFFICIENCY IN KOSOVO AND METOHIA:
RATIO OF DIFFERENTIAL SHIFT AND REAL GDP

In %

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-24.0	-8.1	-	74.7	-44.5	-16.0	-46.1	-37.8	6.3	33.0
1966	-24.5	-29.0	-	65.5	-37.3	-27.5	-48.0	-31.8	2.3	36.6
1967	-32.2	-28.0	47.7	64.1	-48.9	-47.6	-84.3	-36.3	-0.7	45.4
1968	-40.6	-60.1	39.5	50.7	-57.5	-50.6	-90.6	-31.2	-8.7	50.3
1969	-34.8	-46.6	40.8	51.6	-58.6	-25.9	-80.1	-27.9	-0.6	47.4
1970	-34.5	-60.1	45.8	51.3	-60.2	-16.3	-82.7	-24.6	4.2	34.8
1971	-40.7	-96.7	27.1	44.6	-73.6	-2.8	-76.4	-26.9	4.6	38.6
1972	-35.9	-133.0	9.4	49.2	-63.1	-2.5	-60.7	-21.3	10.7	46.6
1973	-42.5	-162.5	2.2	35.7	-70.7	-6.5	-64.0	-20.4	2.1	48.9
1974	-36.4	-134.8	11.3	27.6	-60.6	2.2	-57.4	-21.5	0.1	51.8
1975	-29.7	-67.5	36.7	21.9	-52.0	6.3	-78.0	-19.3	-1.6	51.9
1976	-34.0	-76.0	-71.3	21.9	-53.6	-15.2	-79.8	-18.2	5.9	59.1
1977	-36.5	-120.2	20.6	21.4	-51.7	-9.2	-60.8	-32.8	-4.2	45.5
1978	-40.3	-37.0	34.1	14.0	-60.0	-20.0	-104.8	-29.6	-11.9	37.5
1979	-41.7	-80.6	50.4	13.8	-67.9	0.1	-75.6	-40.4	-5.4	26.2
1980	-41.1	-25.0	69.1	7.5	-76.7	9.6	-81.4	-57.6	-7.4	20.4
1981	-38.0	-36.4	65.9	5.4	-71.2	10.8	-68.1	-34.7	-4.3	22.8
1982	-39.0	-14.2	62.7	-29.0	-73.0	1.8	-88.3	-28.7	-3.3	24.8
1983	-43.9	-28.7	60.2	-39.2	-68.8	-6.6	-92.0	-35.0	-13.0	21.3
1984	-44.3	-27.1	60.8	-43.2	-64.1	-4.7	-81.6	-37.9	-22.3	9.2
1985	-39.9	-30.4	44.8	-31.6	-43.7	-61.7	-75.4	-23.7	-29.3	1.1
1986	-38.6	9.4	-334.3	-79.1	-48.6	-22.6	-61.6	-28.2	-32.6	-14.5
1987	-38.3	14.3	-324.6	-45.5	-45.6	-67.9	-58.9	-26.3	-28.1	-4.6
1988	-39.5	21.6	-303.1	-47.8	-46.9	-76.2	-70.9	-51.8	-29.0	11.7
1989	-47.1	15.1	-224.7	-54.4	-54.7	-82.2	-73.1	-71.4	-35.9	17.0
1990	-77.6	-1.7	-223.1	-98.2	-88.7	-124.2	-97.3	-136.8	-56.7	11.4

On average, one dinar of fixed assets invested in the economy of the region's social sector "produced" only slightly over 20 paras of GDP (0.205). The maximum value of the average capital-output ratio was registered in trade (as was the case in all of the other previously analyzed regions) – 0.873, and the minimum was registered in water management – 0.064.

Not in a single year of the analyzed period was Kosovo and Metohia's real GDP bigger than hypothetical (*Table 2.178*). In other words, during the entire surveyed period the efficiency of the province's fixed assets was below the Yugoslav average. That was the cumulative consequence of the negative influence of the two shifts: both of the above-average share of the sectors with below-average efficiency of fixed assets, and the below-average capital-output ratios of the region's sectors (*Tables 179 and 2.180*).

Trade was the only sector whose GDP was above hypothetical during the entire analyzed period. This was, in the first place, due to its continuously positive structural shift, because its differential shift was positive in only seven years (1965, 1966, and 1970-1974).

The construction sector's GDP was below hypothetical only in 1988. Similar to the case of trade, this was owed primarily to the continuously positive structural shift, while its differential shift was positive in only six years (1974, 1975 and 1979-1982).

In the first 15 years (1965-1979) and in 1981 the forestry sector's GDP was higher than hypothetical. Up until 1977, that was owed to the convergent effect of both positive shifts, while in 1978, 1979 and 1981 of the positive differential shift exceeding the negative structural shift. The period from 1965 to 1981 was also constantly marked with a continuously positive differential shift. As of 1982, until the end of the surveyed period, the differential shift was negative.

From the point of view of the ratio of real and hypothetical GDP, catering and tourism was the next most successful sector. In the first 14 years (1965-1978), its real GDP was above hypothetical, that is, in this period this sector of the Kosovo and Metohia economy had a higher capital-output ratio than the average one on the level of Yugoslavia. Until 1969, this was due to the positive effect of both shifts, and from 1970 to 1978 of the positive differential shift bigger than the negative structural shift. This sector's differential shift was positive until 1985, and from 1988 to 1990, but it was not big enough to prevail over the negative influence of the structural component.

Table 2.181 EFFICIENCY IN KOSOVO AND METOHIA:
NET DIFFERENTIAL SHIFT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-292		-10	159	-391	-46	-18	-79	40	53
1966	-385		-40	107	-365	-77	-18	-75	15	67
1967	-545	-42	12	105	-465	-128	-27	-92	-5	97
1968	-762	-73	9	61	-562	-148	-31	-90	-63	135

1969	-689	-65	11	62	-609	-96	-30	-87	-5	130
1970	-752	-75	13	65	-688	-73	-33	-88	43	83
1971	-948	-124	7	53	-891	-15	-35	-107	55	108
1972	-784	-142	2	65	-869	-13	-33	-91	144	153
1973	-1080	-167	0	39	-989	-33	-36	-95	27	174
1974	-1070	-173	3	28	-1004	13	-36	-109	1	206
1975	-969	-114	13	21	-977	45	-51	-101	-22	216
1976	-1028	-138	-10	21	-1040	-94	-55	-99	88	299
1977	-1466	-191	8	23	-1140	-68	-51	-173	-63	190
1978	-1861	-94	15	13	-1357	-151	-74	-175	-182	144
1979	-1996	-164	30	13	-1580	1	-65	-229	-93	90
1980	-2088	-74	68	7	-1761	105	-70	-301	-126	65
1981	-1971	-103	60	5	-1770	114	-65	-215	-74	77
1982	-2000	-52	52	-20	-1768	16	-78	-179	-58	87
1983	-2272	-94	48	-25	-1736	-45	-80	-211	-200	72
1984	-2401	-97	47	-28	-1713	-31	-75	-228	-304	27
1985	-2381	-102	25	-22	-1395	-263	-76	-168	-383	3
1986	-2565	53	-26	-44	-1652	-133	-63	-213	-451	-35
1987	-2516	83	-26	-31	-1595	-290	-56	-210	-380	-11
1988	-2568	137	-26	-32	-1618	-284	-62	-345	-373	35
1989	-2923	90	-23	-34	-1795	-288	-64	-420	-434	-44
1990	-3599	-8	-21	-40	-2111	-308	-64	-538	-534	25

Table 2.182 EFFICIENCY IN KOSOVO AND METOHIA:
ALLOCATION EFFECT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-234	-5		-140	-66	1	4	19	-14	-33
1966	-204	-30		-90	-55	-7	5	22	-5	-44
1967	-236	-23	-3	-88	-80	-8	4	30	2	-70
1968	-249	-42	-3	-48	-109	-1	5	33	18	-102
1969	-262	-44	-3	-49	-111	2	6	32	2	-95
1970	-283	-50	-5	-52	-148	6	7	35	-16	-58
1971	-374	-67	-3	-41	-212	2	8	42	-24	-79
1972	-485	-80	-1	-51	-219	1	9	37	-67	-114

1973	-454	-93	-0	-29	-241	-1	11	39	-12	-129
1974	-456	-88	-1	-20	-254	1	12	47	-1	-152
1975	-408	-60	-5	-15	-238	1	17	43	9	-160
1976	-555	-64	5	-14	-269	-4	18	43	-41	-229
1977	-391	-80	-3	-16	-274	2	21	66	27	-134
1978	-298	-31	-8	-9	-330	19	18	67	70	-95
1979	-352	-48	-18	-9	-370	-0	15	88	35	-46
1980	-331	-20	-39	-4	-389	-14	19	109	42	-35
1981	-383	-21	-34	-3	-391	-13	19	77	23	-41
1982	-359	-11	-28	9	-386	-2	23	64	18	-47
1983	-285	-14	-26	12	-379	4	22	75	59	-40
1984	-217	-11	-25	12	-361	3	23	78	77	-14
1985	-203	-9	-11	11	-247	-115	24	59	87	-2
1986	-35	2	-81	17	-207	5	25	74	111	19
1987	-63	3	-81	13	-203	14	22	72	91	6
1988	-35	8	-77	13	-203	15	22	117	88	-19
1989	-9	8	-67	14	-228	20	22	142	104	-25
1990	19	-1	-62	17	-284	23	22	185	134	-14

Table 2.183 EFFICIENCY IN KOSOVO AND METOHIA:
TYPES OF ALLOCATION EFFECT

Year	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	1	-	3	1	2	2	2	3	3
1966	1	-	3	1	1	2	2	3	3
1967	1	3	3	1	1	2	2	2	3
1968	1	3	3	1	1	2	2	2	3
1969	1	3	3	1	2	2	2	2	3
1970	1	3	3	1	2	2	2	3	3
1971	1	3	3	1	2	2	2	3	3
1972	1	3	3	1	2	2	2	3	3
1973	1	3	3	1	1	2	2	3	3
1974	1	3	3	1	4	2	2	3	3
1975	1	3	3	1	4	2	2	2	3
1976	1	2	3	1	1	2	2	3	3

1977	1	3	3	1	2	2	2	2	3
1978	1	3	3	1	2	2	2	2	3
1979	1	3	3	1	3	2	2	2	3
1980	1	3	3	1	3	2	2	2	3
1981	1	3	3	1	3	2	2	2	3
1982	1	3	2	1	3	2	2	2	3
1983	1	3	2	1	2	2	2	2	3
1984	1	3	2	1	2	2	2	2	3
1985	1	3	2	1	1	2	2	2	3
1986	4	1	2	1	2	2	2	2	2
1987	4	1	2	1	2	2	2	2	2
1988	4	1	2	1	2	2	2	2	3
1989	4	1	2	1	2	2	2	2	3
1990	1	1	2	1	2	2	2	2	3

In five years, artisanship (in 1965, 1966, and in 1972-1974) and agriculture (in 1986-1990) had real GDPs higher than hypothetical. In agriculture, this was the result of the positive effect of both shifts during four years (1986-1989) when the differential shift was positive. In artisanship, the differential shift was negative during the entire period, and the fact that this sector's real GDP exceeded hypothetical GDP was the result of the positive structural shift prevailing over the negative differential shift in said years.

Although the Kosovo and Metohia water management sector's differential shift was negative in only six years (in 1976 and in 1986-1990), its real GDP did not exceed hypothetical GDP in any of the years surveyed. This happened because of the continuously prevailing influence of the negative structural component.

The manufacturing and transport and communication sectors' real GDP did not surpass the hypothetical in any of the surveyed years. In both cases this was the result of the convergent negative effect of both shifts.

In the entire analyzed period Kosovo and Metohia specialized in the manufacturing and agriculture. During the entire period the manufacturing was a comparatively bad sector, which was also the case with agriculture up to the year 1985 and in 1990 (Type 1 allocation effect). From 1886 to 1989 agriculture was comparatively good (Type 4 allocation effect) – see *Table 2.183*.

Forestry, trade and catering and tourism were non-specialized in sectors, in certain years (forestry in 1965-1981; trade in 1965-1966, 1970-1974 and 1976, catering and tourism in 1965-1985 and 1988-1990) comparatively good (Type 3 allocation effect) and in others comparatively bad (Type 2 allocation effect).

Up until 1985 (with the exception of 1976 which was Type 2) water management was characterized by the Type 3 allocation effect, while in the last five years this sector was specialized in and comparatively bad, leading it into the least favorable position (Type 1 allocation effect).

Construction was marked by all four types of allocation effect: from 1966 to 1968, in 1973, 1976 and 1985 it was Type 1; in 1965, from 1969 to 1972, in 1977-1978, 1983-1984 and 1986-1990 it was Type 2; from 1979 to 1982 it was Type 3, and in 1974 and 1975 it was Type 4.

In all of the years of the surveyed period artisanship and transport and communication were comparatively bad and non-specialized in sectors (Type 2 allocation effect).

Vojvodina

Table 2.184 shows capital-output ratio trends in the Vojvodina economy's social sector.

Much like in the case of all of the surveyed regions (except for Montenegro whose maximum efficiency was in 1970), Vojvodina reached its maximum coefficient in 1965 (0.498) and minimum in 1988 (0.213).

On average, one dinar of fixed assets "generated" 0.340 dinars of GDP. Like in Croatia and Macedonia, trade (1.047) and water management (0.037) appeared as sectors with the highest and the lowest capital-output ratio, respectively.

In only one year (1970) Vojvodina's GDP was smaller than hypothetical. i.e., only in this year was the efficiency of fixed assets in the province below the Yugoslav average (*Table 2.188*). That year the negative influence of the differential shift prevailed over the positive effect of the structural shift. Otherwise, the differential shift was positive from 1971 to 1990, and the structural shift from 1965 to 1978, and from 1982 to 1990 (*Tables 2.189* and *2.190*).

Table 2.184 VOJVODINA: EFFICIENCY OF FIXED ASSETS

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	0,498	0,503	0,071	1,867	0,458	0,959	0,746	0,227	1,445	1,050
1966	0,485	0,554	0,073	1,654	0,417	0,944	0,732	0,222	1,369	1,139
1967	0,475	0,553	0,066	1,700	0,396	0,993	0,713	0,231	1,331	1,002
1968	0,462	0,521	0,059	1,596	0,383	1,001	0,718	0,240	1,220	0,941
1969	0,438	0,458	0,048	1,361	0,369	0,916	0,705	0,244	1,290	0,880
1970	0,416	0,350	0,041	1,160	0,366	0,907	0,742	0,245	1,399	0,511
1971	0,448	0,420	0,044	1,048	0,395	0,879	0,747	0,264	1,548	0,429

1972	0,434	0,376	0,040	0,978	0,403	0,795	0,735	0,255	1,447	0,369
1973	0,432	0,417	0,042	1,034	0,390	0,737	0,707	0,262	1,413	0,339
1974	0,447	0,429	0,041	0,990	0,415	0,765	0,734	0,287	1,321	0,293
1975	0,426	0,381	0,034	0,767	0,399	0,817	0,793	0,269	1,294	0,338
1976	0,415	0,394	0,037	0,766	0,379	0,848	0,832	0,259	1,214	0,328
1977	0,422	0,414	0,041	0,697	0,384	0,863	0,677	0,245	1,249	0,371
1978	0,416	0,360	0,041	0,652	0,376	0,973	0,642	0,244	1,285	0,394
1979	0,408	0,350	0,041	0,589	0,367	0,996	0,535	0,220	1,303	0,423
1980	0,391	0,344	0,036	0,456	0,355	0,973	0,509	0,200	1,232	0,405
1981	0,391	0,337	0,035	0,447	0,355	0,924	0,459	0,200	1,284	0,374
1982	0,382	0,351	0,037	0,376	0,341	0,843	0,437	0,185	1,278	0,395
1983	0,365	0,329	0,038	0,322	0,336	0,709	0,389	0,182	1,201	0,408
1984	0,366	0,353	0,036	0,366	0,339	0,652	0,395	0,192	1,133	0,415
1985	0,350	0,332	0,036	0,352	0,328	0,595	0,411	0,192	1,108	0,366
1986	0,349	0,334	0,038	0,322	0,329	0,527	0,334	0,197	1,133	0,322
1987	0,340	0,322	0,038	0,330	0,333	0,484	0,307	0,191	1,046	0,285
1988	0,326	0,317	0,038	0,369	0,327	0,444	0,303	0,160	0,979	0,258
1989	0,319	0,305	0,36	0,358	0,328	0,355	0,265	0,162	0,959	0,235
1990	0,290	0,295	0,033	0,315	0,292	0,292	0,239	0,136	0,910	0,209

Table 2.185 EFFICIENCY IN VOJVODINA: HYPOTHETICAL GDP

1972 prices

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	12677	2597	793	21	5608	464	139	2107	804	143
1966	13706	2816	922	23	6074	528	140	2184	879	141
1967	13826	2788	1010	22	6124	547	134	2147	912	143
1968	14194	2786	1066	22	6259	592	134	2146	1036	153
1969	16421	3400	1378	26	7252	687	143	2271	1094	170
1970	17692	3715	1373	32	7875	751	142	2410	1110	284
1971	18666	3983	1633	36	8195	835	153	2367	1117	347
1972	19338	4122	1686	38	8381	896	162	2446	1222	385
1973	20007	4034	1724	36	8997	893	171	2485	1257	410
1974	21661	4303	1924	40	9724	930	181	2550	1471	537
1975	22527	4329	2072	51	10355	950	188	2634	1473	475

1976	23142	4439	2039	49	10756	982	180	2677	1514	505
1977	24880	4655	2135	58	11623	1064	239	3025	1601	480
1978	27052	4961	2184	62	12850	1130	275	3376	1730	485
1979	29584	5072	2276	67	14546	1168	363	3718	1865	508
1980	30672	5080	2240	81	15536	1158	362	3804	1904	507
1981	30891	5064	2224	85	15662	1175	388	3843	1930	521
1982	30690	4974	2141	87	15653	1170	396	3851	1907	510
1983	30263	5006	2041	103	15422	1152	418	3748	1864	511
1984	31079	5285	2078	96	15831	1199	421	3767	1886	515
1985	31713	5260	2087	104	16372	1215	429	3896	1831	519
1986	32523	5374	2054	114	16826	1311	437	4050	1843	515
1987	32135	5259	1997	113	16673	1319	438	4040	1792	505
1988	31509	5184	1921	109	16330	1295	427	4001	1752	490
1989	31504	5233	1887	115	16257	1292	421	4067	1748	484
1990	28327	4742	1676	106	14584	1161	377	3673	1575	433

Table 2.186 EFFICIENCY IN VOJVODINA: STRUCTURAL SHIFT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	1403	-305	-581	9	-1085	1186	134	-1278	3255	68
1966	1903	-88	-661	10	-1262	1324	121	-1307	3722	44
1967	1490	-135	-720	8	-1395	1433	112	-1216	3387	17
1968	1423	-294	-787	6	-1401	1510	103	-1177	3454	10
1969	908	-498	-1027	5	-1623	1654	110	-1222	3502	7
1970	201	-891	-1054	6	-1698	1757	113	-1256	3269	-44
1971	295	-497	-1242	6	-1779	1686	114	-1215	3297	-75
1972	130	-664	-1293	6	-1661	1656	125	-1262	3334	-111
1973	198	-514	-1307	4	-1708	1413	126	-1243	3556	-129
1974	514	-479	-1452	2	-1711	1435	114	-1268	4060	-188
1975	59	-822	-1615	3	-1784	1614	138	-1337	4028	-165
1976	229	-575	-1556	2	-1874	1701	136	-1342	3926	-189
1977	331	-558	-1595	4	-1974	1881	152	-1563	4159	-175
1978	82	-892	-1658	-2	-2283	2087	151	-1714	4571	-178
1979	-40	-813	-1738	-3	-2635	2238	144	-1905	4849	-177
1980	-153	-792	-1693	-6	-2637	2146	140	-1944	4811	-178

1981	-26	-697	-1647	-3	-2276	1986	150	-1982	4620	-178
1982	374	-167	-1573	1	-2253	1740	167	-2029	4654	-166
1983	484	-116	-1472	1	-1951	1375	181	-1930	4550	-154
1984	657	155	-1523	1	-1646	1250	170	-1928	4330	-153
1985	244	-144	-1529	0	-1484	1168	175	-1971	4180	-151
1986	551	131	-1556	-2	-1394	1183	99	-2016	4285	-179
1987	467	83	-1496	-3	-1127	1148	55	-1915	3918	-196
1988	417	122	-1430	-2	-944	949	59	-1851	3689	-175
1989	566	234	-1420	-6	-729	893	66	-1891	3647	-230
1990	752	535	-1244	-10	-730	746	41	-1667	3281	-199

Table 2.187 EFFICIENCY IN VOJVODINA: DIFFERENTIAL SHIFT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-407	537	-91	54	1044	-685	-48	206	-1540	115
1966	-904	724	-113	53	790	-749	-35	194	-1938	170
1967	-163	908	-137	56	875	-726	-26	213	-1498	172
1968	-213	919	-131	55	769	-710	-11	242	-1521	176
1969	-545	739	-195	52	629	-871	-18	246	-1299	172
1970	-647	225	-188	49	590	-910	-7	229	-736	101
1971	820	467	-221	46	1235	-786	3	325	-330	80
1972	796	286	-232	46	1427	-833	1	319	-287	70
1973	1346	667	-237	52	1466	-666	4	381	-386	65
1974	1435	677	-279	54	1837	-630	29	503	-791	35
1975	1572	643	-278	45	1841	-610	49	488	-700	94
1976	1899	730	-286	47	1826	-494	78	484	-606	120
1977	2303	946	-309	44	2020	-540	32	474	-525	161
1978	2008	552	-296	44	1933	-369	31	467	-543	188
1979	1750	353	-297	39	1919	-388	-3	311	-411	227
1980	1369	357	-336	23	1751	-309	-13	162	-483	216
1981	2685	367	-359	23	2042	-146	-44	275	329	198
1982	2971	272	-337	7	2114	-43	-59	250	525	241
1983	2967	134	-333	-3	2346	-35	-103	266	416	278
1984	2779	224	-329	9	2117	-78	-86	360	273	288
1985	1931	222	-328	8	1514	-176	-66	363	182	213
1986	1293	-58	-260	-1	1353	-401	-93	385	201	167

1987	1691	-26	-260	7	1883	-462	-71	301	175	143
1988	1859	90	-253	25	2163	-355	-62	-46	196	101
1989	1685	-108	-238	29	2363	-647	-113	42	230	127
1990	2021	24	-220	31	2308	-622	-76	-110	577	109

Table 2.188 EFFICIENCY IN VOJVOVDINA:
RATIO OF HYPOTHETICAL AND REAL GDP

In %

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	92.7	91.8	650.4	24.7	100.7	48.1	61.9	203.4	31.9	43.9
1966	93.2	81.6	622.9	27.3	108.4	47.9	61.7	204.0	33.0	39.7
1967	91.2	78.3	659.8	25.5	109.3	43.6	60.8	187.5	32.5	43.2
1968	92.1	81.7	725.0	26.7	111.2	42.5	59.3	177.2	34.9	45.2
1969	97.8	93.4	883.6	31.5	115.9	46.7	60.7	175.4	33.2	48.7
1970	102.6	121.9	1048.0	36.8	116.4	47.0	57.4	174.3	30.5	83.4
1971	94.4	100.8	955.2	40.4	107.1	48.1	56.6	160.3	27.3	98.5
1972	95.4	110.1	1047.1	42.3	102.9	52.1	56.3	162.7	28.6	112.2
1973	92.8	96.3	957.6	38.8	102.8	54.5	56.8	153.2	28.4	118.3
1974	91.7	95.6	997.0	41.4	98.7	53.6	55.9	142.9	31.0	139.8
1975	93.2	104.3	1163.8	51.8	99.5	48.6	50.1	147.6	30.7	117.5
1976	91.6	96.6	1035.1	49.7	100.5	44.9	45.7	147.1	31.3	115.9
1977	90.4	92.3	928.1	54.8	99.6	44.2	56.4	156.2	30.6	103.0
1978	92.8	107.4	949.5	59.2	102.8	39.7	60.1	158.5	30.0	97.9
1979	94.5	110.0	940.7	65.5	105.2	38.7	72.0	175.1	29.6	91.0
1980	96.2	109.4	1056.8	82.6	106.1	38.7	74.0	188.1	30.6	93.0
1981	92.1	107.0	1020.1	80.6	101.5	39.0	78.6	179.9	28.1	96.2
1982	90.2	97.9	923.0	91.5	100.9	40.8	78.7	185.9	26.9	87.1
1983	89.8	99.6	864.7	101.9	97.5	46.2	84.3	179.9	27.3	80.4
1984	90.0	93.3	915.5	89.9	97.1	50.6	83.4	171.3	29.1	79.3
1985	93.6	98.5	903.7	92.9	99.8	55.1	79.8	170.3	29.6	89.4
1986	94.6	98.7	862.9	102.6	100.2	62.6	98.7	167.4	29.1	102.4
1987	93.7	98.9	828.4	96.4	95.7	65.8	103.7	166.5	30.4	111.8
1988	93.3	96.1	807.2	82.6	93.1	68.6	100.6	190.2	31.1	117.8
1989	93.3	97.6	823.9	83.3	90.9	84.0	112.3	183.4	31.1	126.9
1990	91.1	89.5	794.1	83.8	90.2	90.4	110.3	193.7	29.0	126.5

Table 2.189 EFFICIENCY IN VOJVODINA:
RATIO OF STRUCTURAL SHIFT AND REAL GDP

In %

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965.	10.3	-10.8	-475.9	10.6	-19.5	122.9	59.5	-123.4	129.2	20.7
1966.	12.9	-2.5	-446.6	11.4	-22.5	120.0	53.6	-122.1	139.8	12.4
1967.	9.8	-3.8	-470.5	8.9	-24.9	114.2	50.9	-106.2	120.9	5.0
1968.	9.2	-8.6	-535.6	6.9	-24.9	108.5	45.7	-97.2	116.3	3.0
1969.	5.4	-13.7	-658.4	5.6	-25.9	112.6	46.9	-94.4	106.2	1.9
1970.	1.2	-29.2	-804.6	6.8	-25.1	109.9	45.6	-90.8	89.7	-13.0
1971.	1.5	-12.6	-726.1	7.2	-23.3	97.2	42.2	-82.2	80.7	-21.4
1972.	0.6	-17.7	-803.1	6.2	-20.4	96.4	43.4	-83.9	78.1	-32.4
1973.	0.9	-12.3	-726.0	4.7	-19.5	86.1	41.9	-76.7	80.3	-37.2
1974.	2.2	-10.6	-752.3	2.5	-17.4	82.7	35.2	-71.1	85.6	-48.8
1975.	0.2	-19.8	-907.4	2.8	-17.1	82.6	36.8	-74.9	83.9	-40.9
1976.	0.9	-12.5	-789.7	2.2	-17.5	77.7	34.4	-73.7	81.2	-43.4
1977.	1.2	-11.1	-693.7	3.3	-16.9	78.2	36.0	-80.7	79.5	-37.6
1978.	0.3	-19.3	-721.0	-1.4	-18.3	73.3	33.1	-80.5	79.4	-35.9
1979.	-0.1	-17.6	-718.1	-3.0	-19.1	74.2	28.5	-89.7	76.9	-31.7
1980.	-0.5	-17.0	-798.5	-6.5	-18.0	71.7	28.6	-96.1	77.2	-32.6
1981.	-0.1	-14.7	-755.4	-2.8	-14.8	65.9	30.4	-92.8	67.2	-32.9
1982.	1.1	-3.3	-677.9	0.9	-14.5	60.7	33.0	-97.9	65.7	-28.3
1983.	1.4	-2.3	-623.5	0.6	-12.3	55.2	36.5	-92.6	66.6	-24.2
1984.	1.9	2.7	-670.8	1.4	-10.1	52.7	33.7	-87.7	66.7	-23.6
1985.	0.7	-2.7	-661.7	0.2	-9.0	52.9	32.5	-86.2	67.5	-26.1
1986.	1.6	2.4	-653.7	-1.6	-8.3	56.5	22.4	-83.4	67.7	-35.5
1987.	1.4	1.6	-620.6	-2.4	-6.5	57.3	13.0	-78.9	66.6	-43.4
1988.	1.2	2.3	-601.0	-1.1	-5.4	50.2	13.9	-88.0	65.4	-42.1
1989.	1.7	4.4	-620.1	-4.4	-4.1	58.8	17.7	-85.2	64.8	-60.3
1990.	2.4	10.1	-589.7	-8.3	-4.5	58.0	12.0	-87.9	60.4	-58.3

Table 2.190 EFFICIENCY IN VOJVODINA:
RATIO OF DIFFERENTIAL SHIFT AND REAL GDP

In %

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-3.0	19.0	-74.5	64.7	18.8	-71.0	-21.3	19.9	-61.1	35.3
1966.	-6.1	21.0	-76.3	61.2	14.1	-67.8	-15.3	18.1	-72.8	47.9
1967	-1.1	25.5	-89.3	65.6	15.6	-57.9	-11.7	18.6	-53.5	51.8
1968	-1.4	27.0	-89.4	66.4	13.7	-51.0	-5.1	20.0	-51.2	51.8
1969	-3.2	20.3	-125.3	63.0	10.0	-59.3	-7.6	19.0	-39.4	49.4
1970	-3.8	7.4	-143.4	56.4	8.7	-56.9	-3.0	16.5	-20.2	29.6
1971	4.1	11.8	-129.1	52.4	16.1	-45.3	1.2	22.0	-8.1	22.8
1972	3.9	7.6	-144.0	51.5	17.5	-48.5	0.2	21.2	-6.7	20.3
1973	6.2	15.9	-131.6	56.5	16.7	-40.6	1.4	23.5	-8.7	18.9
1974	6.1	15.0	-144.6	56.1	18.6	-36.3	8.9	28.2	-16.7	9.1
1975	6.5	15.5	-156.3	45.5	17.7	-31.3	13.2	27.3	-14.6	23.3
1976	7.5	15.9	-145.4	48.1	17.1	-22.6	19.8	26.6	-12.5	27.4
1977	8.4	18.8	-134.5	41.9	17.3	-22.5	7.6	24.5	-10.0	34.6
1978	6.9	12.0	-128.5	42.2	15.5	-13.0	6.7	21.9	-9.4	38.0
1979	5.6	7.6	-122.6	37.5	13.9	-12.9	-0.5	14.6	-6.5	40.7
1980	4.3	7.7	-158.3	23.9	12.0	-10.3	-2.6	8.0	-7.7	39.6
1981	8.0	7.7	-164.7	22.2	13.2	-4.8	-8.9	12.9	4.8	36.6
1982	8.7	5.4	-145.1	7.6	13.6	-1.5	-11.7	12.1	7.4	41.2
1983	8.8	2.7	-141.1	-2.5	14.8	-1.4	-20.8	12.8	6.1	43.8
1984	8.1	4.0	-144.8	8.7	13.0	-3.3	-17.1	16.4	4.2	44.3
1985	5.7	4.2	-141.9	6.8	9.2	-8.0	-12.2	15.9	2.9	36.6
1986	3.8	-1.1	-109.2	-1.0	8.1	-19.2	-21.1	15.9	3.2	33.1
1987	4.9	-0.5	-107.9	6.0	10.8	-23.0	-16.7	12.4	3.0	31.5
1988	5.5	1.7	-106.2	18.6	12.3	-18.8	-14.5	-2.2	3.5	24.3
1989	5.0	-2.0	-103.8	21.1	13.2	-42.1	-30.1	1.9	4.1	33.3
1990	6.5	0.5	-104.4	24.5	14.3	-48.4	-22.3	-5.8	10.6	31.7

In every year of the surveyed period construction and trade achieved a higher GDP than hypothetical. In both cases this was the result of the decisive influence of a continuously positive structural shift. On the other hand, the construction sector's differential shift was negative throughout the surveyed period, while in trade it was positive only in the last ten years (1981-1990).

The artisanship sector's fixed assets had lower efficiency than the Yugoslav average only in the last four years (1987-1990). In others, it was the result of the convergent effect of both positive shifts (from 1971 to 1978), and in the remaining years of the positive structural shift prevailing over the negative differential shift.

Much like in the case of artisanship, in forestry, too, real GDP was lower than hypothetical in only two years (1983 and 1986). In 1983 it was the consequence of a negative differential shift that was higher than the positive structural shift, and in 1986 of the convergent negative effect of both shifts. These two years were also the only ones in which the sectoral efficiency of fixed assets was lower than the Yugoslav average.

In 16 years (1965-1969, 1973, 1974, 1976, 1977, 1982-1988, and in 1990) the efficiency of fixed assets in agriculture was above the Yugoslav average. Except in 1984 and 1986-1988, this was the result of the positive differential shift being higher than the negative structural shift. In 1984, 1988 and 1990 the fact that real GDP was higher than hypothetical was owed to the positive influence of both shifts, and in 1986, 1987, and 1989, of the positive structural shift prevailing over the negative differential shift (these three years were also the only ones in which this sector's differential shift was negative).

Despite its capital-output ratio being constantly above average, the manufacturing's real GDP was bigger than hypothetical in only ten years: 1974, 1975, 1977, 1983-1985, and 1987-1990. This means that in all other years the negative influence of the structural shift predominated.

Table 2.191 EFFICIENCY IN VOJVODINA: NET DIFFERENTIAL SHIFT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	791	146	-18	441	1302	-614	-43	320	-1003	261
1966	452	208	-23	398	983	-640	-34	305	-1220	475
1967	973	272	-26	467	1090	-607	-26	330	-1049	522
1968	978	284	-25	462	958	-585	-12	372	-1042	566
1969	603	223	-38	420	784	-741	-20	398	-1024	600
1970	253	66	-38	333	724	-787	-9	366	-673	271
1971	1670	130	-42	278	1545	-659	4	544	-323	194
1972	1819	78	-44	269	1799	-692	1	526	-286	168
1973	2101	190	-44	334	1782	-588	5	639	-375	157
1974	2431	195	-51	342	2234	-575	35	890	-710	70
1975	2500	187	-49	228	2215	-578	64	850	-637	220
1976	2784	215	-52	248	2183	-468	109	830	-560	279
1977	3071	278	-58	208	2407	-508	39	781	-489	413

1978	3013	164	-57	207	2280	-358	36	743	-509	506
1979	2746	107	-58	178	2218	-399	-3	480	-391	614
1980	2142	111	-66	91	1965	-331	-14	255	-469	600
1981	3506	114	-69	86	2292	-154	-47	436	318	530
1982	3857	84	-66	26	2360	-45	-62	394	509	656
1983	4025	41	-65	-8	2632	-36	-103	423	402	739
1984	3861	68	-65	32	2371	-79	-88	588	265	768
1985	2794	68	-65	25	1670	-183	-69	590	183	575
1986	2200	-18	-59	-3	1492	-391	-98	619	203	456
1987	2552	-8	-60	21	2069	-450	-73	478	178	397
1988	2423	28	-59	76	2379	-347	-64	-72	199	283
1989	2501	-34	-56	86	2598	-635	-118	65	235	361
1990	2612	8	-52	89	2529	-614	-79	-172	593	312

Table 2.192 EFFICIENCY IN VOJVODINA: ALLOCATION EFFECT

Year	TOT	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	-1197	392	-73	-386	-258	-71	-5	-113	-537	-146
1966	-1356	516	-90	-345	-193	-108	-1	-112	-718	-305
1967	-1136	636	-111	-411	-216	-119	0	-116	-449	-350
1968	-1191	636	-106	-407	-190	-125	1	-130	-479	-391
1969	-1148	516	-158	-368	-155	-131	2	-152	-274	-428
1970	-900	159	-150	-284	-134	-123	1	-137	-62	-171
1971	-850	338	-178	-232	-310	-127	-0	-220	-6	-114
1972	-1023	209	-188	-223	-372	-141	-0	-207	-1	-99
1973	-755	477	-192	-282	-317	-78	-1	-259	-12	-92
1974	-996	482	-228	-287	-397	-55	-6	-388	-81	-35
1975	-928	456	-229	-183	-375	-33	-15	-362	-63	-126
1976	-886	515	-234	-201	-357	-26	-31	-346	-47	-160
1977	-768	668	-251	-163	-387	-33	-6	-307	-36	-252
1978	-1005	389	-239	-163	-347	-11	-5	-276	-34	-318
1979	-997	245	-239	-139	-299	11	0	-169	-20	-387
1980	-773	247	-270	-67	-214	22	1	-94	-14	-384
1981	-821	253	-290	-62	-250	8	3	-161	11	-332

1982	-886	187	-271	-19	-246	2	3	-143	16	-415
1983	-1058	93	-268	5	-287	1	-0	-157	14	-460
1984	-1082	156	-264	-22	-255	1	2	-228	8	-480
1985	-863	154	-263	-17	-156	6	3	-227	-1	-362
1986	-908	-40	-201	2	-139	-10	4	-233	-2	-289
1987	-861	-18	-200	-14	-186	-12	2	-177	-3	-254
1988	-564	62	-194	-51	-215	-9	2	26	-3	-182
1989	-817	-74	-182	-57	-235	-11	5	-23	-5	-234
1990	-591	17	-168	-58	-220	-8	3	63	-15	-203

Table 2.193 EFFICIENCY IN VOJVODINA: TYPES OF ALLOCATION EFFECT

Year	AGR	WAT	FOR	MAN	CON	ART	TRC	TRD	TOU
1965	4	1	3	3	1	1	3	1	3
1966	4	1	3	3	1	1	3	1	3
1967	4	1	3	3	1	2	3	1	3
1968	4	1	3	3	1	2	3	1	3
1969	4	1	3	3	1	2	3	1	3
1970	4	1	3	3	1	2	3	1	3
1971	4	1	3	3	1	3	3	1	3
1972	4	1	3	3	1	3	3	1	3
1973	4	1	3	3	1	3	3	1	3
1974	4	1	3	3	1	3	3	1	3
1975	4	1	3	3	1	3	3	1	3
1976	4	1	3	3	1	3	3	1	3
1977	4	1	3	3	1	3	3	1	3
1978	4	1	3	3	1	3	3	1	3
1979	4	1	3	3	2	2	3	1	3
1980	4	1	3	3	2	2	3	1	3
1981	4	1	3	3	2	2	3	4	3
1982	4	1	3	3	2	2	3	4	3
1983	4	1	2	3	2	1	3	4	3
1984	4	1	3	3	2	2	3	4	3
1985	4	1	3	3	2	2	3	3	3
1986	1	1	2	3	1	2	3	3	3

1987	1	1	3	3	1	2	3	3	3
1988	4	1	3	3	1	2	2	3	3
1989	1	1	3	3	1	2	3	3	3
1990	4	1	3	3	1	2	2	3	3

The Vojvodina catering and tourism sector achieved a real GDP higher than hypothetical in 15 years (1965-1971 and 1987-1985). Given that this sector had a continuously positive differential shift and that its structural shift was positive only from 1965 to 1969, in the latter sub-period the above-average efficiency of its fixed assets was the result of the positive influence of both shifts. In all other years the positive effect of the differential shift prevailed over the negative structural shift.

Although the efficiency of fixed assets of transport and communication was lower than the corresponding average at the level of Yugoslavia only in 1988, this sector's real GDP was not bigger than hypothetical in any of the surveyed years. This was the consequence of the predominant influence of the continuously negative structural component.

The water management sector's GDP did not exceed hypothetical GDP in any of the surveyed years, which was the result of the negative influence of both shifts throughout the period surveyed.

With the exception of 1986, 1987 and 1989 (Type 1 allocation effect) Vojvodina – quite expectedly – specialized in agriculture as a comparatively good sector (Type 4 allocation effect). The province also specialized in water management, although the sector was comparatively bad throughout the surveyed period (Type 1 allocation effect) – see *Table 2.193*.

The same situation was in construction from 1965 to 1978, and from 1986 to 1990; from 1979 to 1985 construction was characterized by the Type 2 allocation effect.

Up until 1984 Vojvodina specialized in trade, a sector that was comparatively bad from 1965 to 1980 (Type 1 allocation effect), and comparatively good from 1981 to 1984 (Type 4 allocation effect). The last six years were characterized by the Type 3 allocation effect.

The manufacturing and catering and tourism were comparatively good during the entire analyzed period, but Vojvodina did not specialize in them (Type 3 allocation effect). The case with forestry and transport and communication was similar, with a few exceptions. The exceptions in forestry pertained to the years 1983 and 1986, and in transport and communication to 1988 and 1990, when these sectors were comparatively bad and non-specialized in (Type 2 allocation effect).

From 1971 to 1978 Vojvodina's artisanship sector was Type 3; in 1965, 1966 and 1983 Type 1, and in all other years of the Type 2 allocation effect.

Chapter Q

AVERAGE AND EXTREME VALUES OF CAPITAL-OUTPUT RATIO BY REGION

Table 2.194 offers a survey of average, maximal and minimal values of capital-output ratios by region. Most regions achieved their highest value capital-output ratios in 1965. Montenegro was an exception, as it achieved its highest capital-output ratio in 1970. When all regions are considered, central Serbia had a “top” maximum (0.508 dinars relative to the value of one dinar of fixed assets), as opposed to Montenegro, with the “smallest” maximum of 0.312 dinars.

All regions had their lowest capital-output ratios in 1990. Montenegro was at the bottom of the list, with 0.165, while central Serbia topped it, with 0.329.

From 1965 to 1990, central Serbia had the highest average value of its capital-output ratio (0.374), and Montenegro the lowest (0.203).

Fixed assets in the sector of trade in all regions achieved the highest GDP. It should be noted that trade (with the exception of Kosovo and Metohia) was the best sector where labor productivity was concerned.

Viewed by region, the highest sectoral average was achieved in central Serbia's trade sector (a capital-output ratio of 1.371) and the lowest in Montenegro's trade sector (0.752).

Transport and communication (in Bosnia and Herzegovina, Slovenia, central Serbia and Kosovo and Metohia), water management (in Croatia, Macedonia, all of Serbia and Vojvodina) and artisanship (in Montenegro) were the worst sectors. The worst of all was Vojvodina's water management sector (a capital-output ratio of 0.037), which made all of Serbia's water management the least efficient sector. Out of all of the most inefficient sectors, the least poor was central Serbia's transport and communication sector (a capital-output ratio of 0.178).

Table 2.194 SURVEY OF AVERAGE AND EXTREME VALUES
OF CAPITAL-OUTPUT RATIO BY REGION

	BIH	MNO	CRO	MAK	SLO	SRB	CES	KIM	VOJ
Maximum									
Year	1965	1970	1965	1965	1965	1965	1965	1965	1965
Value	0,402	0,312	0,459	0,451	0,482	0,495	0,508	0,354	0,498
Minimum									
Year	1988	1988	1988	1988	1988	1988	1988	1988	1988
Value	0,250	0,192	0,300	0,298	0,314	0,340	0,365	0,213	0,326
Average in 1965-1988	0,324	0,254	0,385	0,373	0,410	0,410	0,426	0,271	0,411
Maximum sector average									
Sector	TRD	TRD	TRD	TRD	TRD	TRD	TRD	TRD	TRD
Value	1,442	1,105	1,579	1,502	1,297	1,572	1,758	1,424	1,271
Minimum sector average									
Sector	TRC	TRC	WAT	WAT	TRC	WAT	TRC	TRC	WAT
Value	0,162	0,162	0,073	0,083	0,164	0,083	0,195	0,141	0,043

Chapter R

CAPITAL-OUTPUT RATIO: BOUDEVILLE'S MODIFIED TYPOLOGY OF REGIONS

The sum of the values of structural and differential shifts represents the net influence of the efficiency of fixed assets (measured according to capital-output ratio) of a region on the size of GDP. If the sum is positive, the region's GDP is higher than hypothetical, i.e. the one the region would have had with average efficiency, and vice versa. Depending on the minus or plus sign, magnitude, convergent influence and ratio of structural and differential shift, a region is classified as one of eight possible types, whose characteristics are systematized in *Table 2.2*.

The GDP of Type 1, 2, 3, and 4 regions is higher than hypothetical, meaning that the net effect of regional efficiency of fixed assets is positive. Type 1 and 2 regions are characterized, from the point of view of fixed assets efficiency, by favorable structure and above-average efficiency. GDP of Type 3 regions is higher than proportional owing to a predominant influence of more efficient sectors, while in the case of Type 4 regions, their position is owed to above-average regional fixed assets efficiency.

The GDP of Type 5, 6, 7, and 8 regions is smaller than the corresponding proportional, i.e. the net effect of the structural and differential component of fixed assets efficiency in such regions is negative. In the case of Type 5 regions, this is caused by the number of inefficient sectors, i.e. the region's unfavorable structure, the effect of which exceeds the positive influence of the differential shift. Type 6 regions, despite having more efficient sectors and, consequently, a positive structural shift, do not achieve the proportional part of GDP, because the negative effects of the sectors' inefficiency (measured by the capital-output ratio) exceed the positive effect of structure. The position of Type 7 and 8 regions is the consequence of unfavorable structure and the regional inefficiency of said regions' sectors.

Table 2.195 shows that from the point of view of the efficiency of fixed assets, Yugoslavia's regions can be classified as successful (Slovenia, central Serbia and Vojvodina), periodically (un)successful (Croatia and Macedonia), and unsuccessful (Bosnia-Herzegovina, Kosovo-Metohia and Montenegro).

Table 2.195 CAPITAL-OUTPUT RATIO:
BOUDEVILLE'S MODIFIED TYPOLOGY OF REGIONS

Year	BIH	MNO	CRO	MAK	SLO	SRB	CES	KIM	VOJ
1965	7	7	6	7	2	1	2	7	3
1966	7	7	4	5	2	2	4	7	3
1967	7	7	4	5	2	2	2	7	3
1968	7	7	4	7	2	1	2	7	3
1969	7	7	4	7	2	1	2	7	3
1970	7	7	4	6	1	3	1	7	3
1971	7	7	4	4	1	3	1	7	2
1972	7	7	4	4	1	3	1	7	2
1973	7	7	4	8	1	2	2	7	2
1974	7	7	4	7	1	2	4	7	2
1975	7	7	4	5	1	4	4	7	2
1976	7	7	4	5	1	2	2	7	2
1977	7	7	4	5	1	2	2	7	2
1978	7	7	4	5	1	4	2	7	2
1979	7	7	4	5	1	4	4	7	4
1980	7	7	4	5	1	4	2	7	4
1981	7	7	4	5	3	2	2	7	4
1982	7	7	4	5	1	2	2	7	2
1983	7	7	4	5	1	2	2	7	2
1984	7	7	8	5	1	2	2	7	2
1985	7	7	6	5	1	2	2	5	2
1986	7	7	6	5	1	2	2	7	2
1987	5	7	6	5	1	2	2	7	2
1988	5	7	6	5	1	2	2	7	2
1989	6	7	8	6	3	2	2	7	2
1990	7	7	8	6	3	2	2	7	2

Various combinations of favorable sectoral structure and above-average regional efficiency of fixed assets in all years from 1965 to 1990 determined the type of Slovenia's success: from 1970 to 1980 and from 1982 to 1988 it was Type 1, and from 1965 to 1969 Type 2. In 1981, 1989 and 1990 it was Type 3.

During three years (1970-1972) central Serbia was characterized by a Type 1 success; for 18 years (1965, 1967-1969, 1976-1978, and 1980-1990) it was Type 2, and during four years (1966, 1974-1976 and in 1979) it had Type 4 success.

Vojvodina's success had a Type 2 character in 1971-1978 and 1982-1990; Type 3 in 1965-1970, and Type 4 in 1979-1981.

Croatia's initial and final years (1965 and 1985-1988 – Type 6, and 1984, 1989 and 1990 – Type 8) were unsuccessful, while in the period from 1966 to 1983, the success of this republic was owed to above-average regional productivity (Type 4).

In almost all years (except for 1971 and 1972 – Type 4) Macedonia's GDP was smaller than proportional. All of the types of unsuccessfulness were registered in this republic: Type 5 in 1966, 1967, and from 1975 to 1988; Type 6 in 1970, 1989 and 1990; Type 7 in 1965, 1968, 1969 and 1972, and Type 8 in 1973.

According to Boudeville's modified typology, Bosnia and Herzegovina was unsuccessful: in the final two years it was Type 5, and in all other years its unsuccessfulness was Type 7 (except for 1989, when it was characterized by Type 6).

The situation in Kosovo and Metohia was similar, being Type 7, except for 1985, when its unsuccessfulness was Type 5.

According to Boudeville's modified criteria the least successful was Montenegro, where all of the surveyed years were Type 7, meaning that its lack of success was the consequence of the unfavorable structure and regional inefficiency of the republic's sectors.

Chapter S

PART TWO: CONCLUSIONS

*S*imilar to the results of the analysis of components of regional employment shifts, fixed assets and GDP, the results of the analysis of the components of regional changes in labor productivity and capital-output ratio show the following:

1. There is a firm connection between the degree of a region's development and its successfulness (measured by the difference between regional and average efficiency), on the condition that both characteristics are positively correlated;

2. The differential shift has a decisive influence on a region's successfulness, with its effect being positive in developed regions (Types 3 and 4) and negative in underdeveloped regions (Types 5 and 7);

3. Differences in the sectoral structure of a region have no significant influence on the differences in their successfulness.

The regions are ranked according to the number of successful years, that being one in which a region had above-average labor productivity, that is, an above-average capital-output ratio.

The ranking of regions is shown in *Tables 2.196* and *2.197*. The types marking the region during successful years are given in parentheses next to the region's name.

Table 2.196 PRODUCTIVITY: RANKING OF REGIONS BY SUCCESSFULNESS

	Region	Number of years	
		successful	unsuccessful
1.	CRO (2; 4), SLO (4)	24	0
2.	VOJ (1; 2; 3)	16	8
3.	MNO (4)	6	18
4.	CES (1; 3)	2	22
5.	MAK, KIM, BIH	0	24

Table 2.197 CAPITAL-OUTPUT RATIO:
RANKING OF REGIONS BY SUCCESSFULNESS

	Region	Number of years	
		successful	unsuccessful
1.	SLO (1; 2; 3), CES (1; 2, 4), VOJ (2; 3; 4)	24	0
2.	CRO (4)	18	6
3.	MAK (4)	2	22
4.	BIH, KIM, MNO	0	24

Developed regions are grouped as successful and mostly successful,²² while underdeveloped regions are mostly unsuccessful. The ranking of regions by efficiency of fixed assets fully coincides with said patterns, while in the case of labor productivity central Serbia deviates from this rule (having had only two successful years, this region belongs to the fourth, penultimate group).

The difference between the most successful and the least successful regions are stark: the most successful regions' efficiency is not below the Yugoslav average in any of the surveyed years, while the efficiency of the least successful is not above the Yugoslav average in any of the surveyed years.

Relatively small differences in the sectoral structure of regional economies, that is, an almost negligible influence of these structural differences on the differences in efficiency of regions, can be explained by the aspirations of macroeconomic decision-makers in said regions to have (wherever possible) everything that Yugoslavia has so that "one day" the regions can function as independent, sovereign states. The "implementation" of that imitative strategy, that is, rounding up their respective economic structures, was conducted, much like on the level of Yugoslavia, according to socialist industrialization patterns. On the other side, however, inherited (initial) structures were persistent. In this (in social terms expensive) clash of (lengthy) projects and processes the autarchy of "national economies" prevailed for non-economic reasons. Meanwhile, a continuous tendency toward self-sufficiency, in conditions in which both economic motivation or the coercion that would lead to more radical structural changes were lacking, resulted, among other, in the reproduction of the regions' "initial" economic structures ("more of the same"): in a milieu in which semi-subsistence, technological and "consensual" (voluntaristic) investment criteria prevailed, where there was a lack of innovativeness coupled with a strong aversion to risk, there were no structural adjustments either. The absence of structural changes equaled an absence of changes for the better. The lack of ele-

22 Mostly successful regions are those which in over one-half of the surveyed years had above-average labor productivity, i.e. an above-average capital-output ratio.

ments of dynamism impacted on the structuring of regional economies: the rigidity of the system was mirrored by the rigidity of structure, i.e. its minimal influence on efficiency.

From comparing the results of the ranking of regions according to successful efficiency and their ranking by growth of production factors (employment and fixed assets) and GDP, a direct conclusion emerges as to the quality of the rapid growth of production factors in underdeveloped regions. The influx of abundant capital (allocated automatically, without control over the purpose and efficiency of investment) and the conditions in which it was used (lax budgetary limitations, socialization of investment risks, zero or minimal cost of capital, institutional and non-institutional pressures by unemployed strata of the population, etc.), unavoidably caused unproductive employment, i.e. inefficient investment. In other words, the rapid growth of production factors in year t , did not have as a result the creation of a basis for growth in the year $t+1$, but a need for increased volume of external capital in the year $t+1$ instead. to (1) preserve the existing inefficient economy and to (2) ensure new (inefficient) growth.

Part Three

INSTITUTIONAL FRAMEWORKS, GROWTH,
STRUCTURAL CHANGES, EFFICIENCY:
THE ECONOMIES OF YUGOSLAVIA,
ITS REPUBLICS AND PROVINCES,
1952-1990

The first two years of the second Yugoslavia were marked by strong efforts to modernize the country through industrialization. In this period the economy was becoming increasingly complex, but its structure remained incomplete, while the changes were not always clearly articulated. Abrupt, almost dramatic changes were a sign of rapid economic growth and the flexibility of the specific Yugoslav planned-market socialism, but they also symbolized shortcomings in management on the macro level and confirmed the system's²³ built-in hazards.

From the mid 1970s, with the devolution of the federal authorities, first the republics and then the provinces became "responsible" for development – the Federation remained in charge of the unified (systemic) ambience; the redistribution model was increasingly suppressed by a generic (developmental) approach, which worsened the regional problem, inherited from the first Yugoslavia²⁴.

The regional problem was not only a question of economic disparities: it also reflected the national question and the issue of state organization. It was also a combined result of different historical influences that had generated a mosaic of cultural patterns.

Officially determining the extent of the regional problem in Yugoslavia was a combined result of the ratio of regional forces (in the first place, the power of the regional elites), economic interests, political will and the ruling ideological postulates. Thus, the status of underdevelopment and the volume of transfers depended, on the one hand, on (unlimited) aspirations and, on the other, on (limited) possibilities.

The "official" proportions of the regional problem in Yugoslavia (the underdeveloped status enjoyed by some republics and provinces) did not reflect the actual situation, because the boundaries of underdeveloped regions did not coincide with the boundaries of the republics and provinces. The Yugoslav regional policy, however, obstinately persisted in a simplified division into economically developed and underdeveloped republics and provinces, which had no foundation in reality. The consequences can be seen in a single example: the regions which in the post-war period had the status of being underdeveloped almost in continuity (Bosnia and Herzegovina, Macedonia, Montenegro and Kosovo and Metohia) in 1948 were home to 30.57% of all Yugoslavia's population, and in 1965, they constituted 33.84%. In 1990, this went up to 40.23%.

If only this example is taken into account, Yugoslav's regional policy (especially after 1965), which, neglecting the interdependence in the development of all

23 In development economics this case is known as frustrated development (or development with structural barriers). More on this in: Časlav Očić, *A Structural Analysis of the Yugoslav Economy from the Early 1950s to the Late 1960s*, Lambert Academic Publisher, Saarbrücken, 2012 (translation of: Часлав Оцић, Структурна анализа југословенске привреде 1952-1962-1968, Службени гласник, Београд 2013).

24 See: Марко Павловић: Југословенска краљевина: прва европска регионална држава, *Зборник Матице српске за друштвене науке*, Year LXIII, №. 141 (4/2012), pp. 503-521.

regions, was limited to only one, specific segment of regional development – the development of insufficiently developed regions, can be considered unsuccessful, as it failed to reduce the number of people living in underdeveloped regions, and led instead to its increase.

Essentially, Yugoslavia's regional policy was characterized by a twofold reductionism: a) by its primary (and as of 1965, exclusively) focus on the republics and provinces (as Yugoslav "regions"²⁵) and b) by focusing on insufficiently developed Yugoslav regions.

The institutional framework for resolving the regional problem underwent changes: from the point of view of regional development two basic phases can be discerned– up until 1965, and after 1965. A third phase can also be identified, with deep roots in the past, but which manifested itself in the last year (1990) of the period analyzed by this work. This phase had the survival of the state of Yugoslavia as the main item on its agenda.

The development conceptions of the second Yugoslavia were strongly inspired by ideology. The regional development concept was crucially influenced by the principle of egalitarianism which on the level of politics manifested itself through various measures of redistribution. Practice, however, showed that in achieving the goals of regional development the real power of regions played a more important role than what ideology-based proclamations suggested. Because it is not only that "ideology possesses the power to transform social reality within specific limits and if it ignores these limits the result will be the opposite of what was desired" (Louis Dumont), but it served to justify regional interests (or more precisely, the interests of the regional elites) hiding behind it.

25 The term "region" (when referring to a republic or province) is used in this book very conditionally, because the doctrine (and also practice) of Yugoslav socialist regionalism followed a course which regionist Branko Kubović summed up in the following way: "...the regional aspect of social-economic development appears as a component... of development, that is, as one of the proportions of development which the structural adjustment of development in general, and consequently in the country as a whole, depends on. It is as important for the development of Yugoslavia as much as it is important for the republics and provinces. The question is, however, which territorial units should represent the regional aspect of Yugoslavia's development. Given that Yugoslavia was a community of the SFRY nations and their respective states-republics, it is obvious that from the point of view of Yugoslavia, for the purpose of understanding the regional aspect of development, the territory of the republics (and provinces) should be considered without viewing them as regions. In other words, the regional aspect of Yugoslavia's development should be renamed the "Development of the republics and provinces." Only conditionally, and for practical, analytical purposes, can this still be called the regional aspect of Yugoslavia's development. The real regional aspect of Yugoslavia's development would only be one that views regions, more precisely Yugoslav regions, as territorial-regional units, but we do not have such regions officially." (Branko Kubović, *Regionalna ekonomika*, Zagreb 1974, p. 58). In a footnote at the end of this quotation, Kubović explains: "Actually, these would be inter-republic border regions, and in this case the republics' borders could be neglected, if need be. Although the possibility to consider the republics' regions as Yugoslav regions should not be ruled out, this should only be accepted conditionally, until the Yugoslav regions have been formed." For a different understanding of the term "region" in the Yugoslav context see the round table debate titled *Zajedništvo i autarkične tendencije u privredi Jugoslavije* (Unity and autarchic tendencies in the Yugoslav economy), *Treći program Radio Beograda*, No. 52, 1982.

Such a configuration of regional interests coupled with a strictly formalized procedure (of the consensual type) inevitably resulted in the perpetuation of decisions and aggravation of existing problems, especially because the initial result of the “harmonization” of interests rested on a “bad political compromise” (Eörsi István). Excessive politicization of regional issues prevented the resolving of the real problems of Yugoslavia’s regional development. Not only did it maintain the *status quo* in inter-regional relations, but it also contributed to the rigidification of regional policy (by rendering its instrument anachronous and inefficient) and its reductionist interpretation as a “one region policy.”

The multi-ethnic composition of the country, the federal state system, and considerable differences in the degree and structure of economic development both between the republics and provinces and within them, made equality the basic strategic goal of Yugoslavia’s regional development during the entire period after 1945. It was believed that equal regional development was not only conducive, in the long-run, to the optimum development of the entire Yugoslav economy, but is also an essential condition for the achievement of both social (“providing working people and citizens with equal opportunities for work and living”) and national equality.

The last forty or so years have seen a considerable change in views on the basic determinants of the strategic goals of regional development: amended or redefined by new constitutions (cooperative) federalism was combined with elements of (conflict-prone) confederalism, and national equality was gradually identified with the equality of the republics and provinces. The emphasis on the components of total development (social – national; political – economic) changed significantly, while in the economic sphere both the concept of development and the systemic framework (centrally planned, market-planned, “consensual”...) were radically changed.

All this, in addition to a host of other factors (for example, those strategic in nature – “strategic territories” as “priority” regions) resulted in the basic goal of regional development in certain phases being realized in different ways and in different (social, political, economic...) environments.

In economic terms, before 1965 the basic goal of the policy of regional development – the rapid development of all regions and the faster development of those less developed – had been pursued mostly within a sectorally defined global optimum, that is, the developmental goals of certain regions were determined having the developmental goals of the entire country in mind. After 1965, this territorially coordinated system of goals was gradually replaced by a globally uncoordinated system of goals. The latter allowed the republics – sovereign entities in the Yugoslav economic space – to pursue separate development objectives, which may have corresponded (but most frequently did not) to the notions of the global (Yugoslav) objective.

SHIFT-SHARE ANALYSIS
OF THE YUGOSLAV ECONOMY
1952–1990

SUMMARY

KEY WORDS

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SUMMARY

*I*n this book in focus are regional growth and sectoral structure relations. The study of the *regional growth / sectoral structure* relation involved various techniques of *shift-share analysis*. In the standard shift-share analysis, regional (economic) growth (in terms of various indicators such as: GNP, employment, fixed assets) was broken down into three parts: proportional hypothetical growth, structural shift and differential (regional) shift.

The results of the shift-share analysis regarding employment, classified according to a modified Boudeville typology, were interpreted from a purely economic point of view, i.e. on the basis of an assumption of an economic logic at work, which labor as a variable factor that accurately reflects both business trends and qualitative and quantitative changes in economic efficiency. According to this assumption employment can be considered as a general indicator of growth, structural changes, success or failure of the economy (whether national, regional or sectoral). Employment, however, is not an economic indicator only: it also reflects social, historical and political aspects of growth. Therefore, the results of an analysis of the components of regional changes in employment cannot be interpreted purely in classical economic terms. Underdevelopment and a relatively abundant supply of labor exerted a strong pressure on employment. Because of the rising expectations of the latently unemployed rural population, growth of employment is often accompanied by an increasing rate of (registered) unemployment. The number of people employed was constantly rising (with the exception of Vojvodina in the 1965-1970 sub-period) thanks to formal and informal channels of job procurement (corruption nepotism, clannism, even tribalism...). A high correlation between non-productive employment and development levels suggests that a considerable number of workers were not employed for production purposes. The political idea of creating a working class (by means of industrialization and urbanization) as the social base for new (Communist Party) elites undoubtedly affected the magnitude and the sectoral and regional dynamics of employment in the social sector. Under soft budget constraints, which characterized the business environment, the social function of employment prevailed over the function of an efficient economy.

Thus, for example, according to the modified Boudeville typology of regions, Montenegro, Kosovo-Metohia and Macedonia, respectively, were the most successful. The least successful were Slovenia and Croatia, with above average growth of employment in only one sub-period. However, this does not mean that Montenegro was economically more successful than Slovenia, but only that employment in the former grew more rapidly than in the latter. If, by chance, both of these regions had applied exclusively of predominantly economic criteria of employment, such a re-

sult could have indicated that Montenegro grew at a higher rate than Slovenia. Then it would have followed that one of the basic goals of Yugoslav regions policy (rapid development of all accompanied by faster development of underdeveloped regions had been achieved. By formal standards, it was achieved in terms of employment, the growth of which was indeed more rapid in underdeveloped regions than in the developed ones. However, since employment was strongly affected by noneconomic factors, it does not mean that the development of these regions was in fact more rapid.

By pointing to non-economic determinants of employment we by no means devalue the results of shift-share analysis: they do provide accurate information about actual changes in employment. These other, non-economic factors undoubtedly produced economic effects. The analysis identifies the components of regional changes in employment and the interpretation of its results should take into account both the non-economic and the economic context of change.

Similarly, the results obtained by shift-share analysis of fixed assets have to be interpreted in economic terms but without losing sight of the social and political contexts. In terms of economic theory the change in fixed assets value is equivalent to the gross investment during the defined sub-periods. Increased investment, if efficient, makes an economy successful. Under the conditions that prevailed in Yugoslavia, however, the very problem lay in the efficiency of fixed assets. First, the Yugoslav economy displayed all the characteristics of a relatively underdeveloped economy (e.g. a relative abundance of labor and a relative shortage of capital) and, second, it was a socialist economy: labor was intended as the pivot around which the system revolves, just as capitalism revolves around capital. In the Yugoslav case, the price of capital was below the price suggested by its relative availability, which under soft budget constraints inevitably resulted in inefficient investment. Thus, more investment did not mean a more successful economy.

When the results are reviewed in this specifically Yugoslav context, it becomes clear why the relatively least developed regions were by Boudeville's typology classified as the most successful ones: the value of their fixed assets grew at the highest rate. Thus, just as with employment, Montenegro, Kosovo-Metohia, and Macedonia were the most successful regions, while the least successful were Croatia and Slovenia. It should be stressed here as well that, despite the apparent paradox, the results of the shift-share analysis precisely describe the actual changes. They only show the effects of a regional policy reduced to mere transfers of money to underdeveloped regions: such a policy may (and did) secure an increase in the book value of fixed capital. Since a status of underdevelopment automatically guaranteed a steady and abundant inflow of cheap capital (through the Federal Fund for Financing the Faster Development of the Underdeveloped Republics and the Autonomous Province of Kosovo), there was a negative correlation between the size of inflow and the efficiency of capital use. Inefficient investment does not support economic development, but prevents it.

Assuming a spontaneous (“organic”) growth, i.e. the domination of the market as the main factor of economic activity coordination, GNP can be considered as the general indicator of growth, of structural changes, the success or failure of an economy (whether national, regional, or sectoral). When market forces are suppressed by various forms of non-market coordination, and free enterprise by normative dirigisme and by standardized agreement among economic “agents”, there is no organic growth. Consequently, the growth rate of the GNP cannot be taken as a definite indicator of the economic success of Yugoslav regions.

In general, results of the shift-share analysis of employment, fixed assets and GNP, and, in particular, the results of a modified Boudeville typology of regions clearly suggest the following conclusions: a) there is a negative correlation between the degree of development of a region and its success (performance); b) crucial to a region’s success is a differential shift, i.e. regional particularities are the key to the differences in their success; c) the structure of regions is not a significant factor of the difference in their success, from which it may be concluded that regional structures do not significantly differ, i.e. that these differences are not so great as to significantly influence the differences in regional success.

In order to make these conclusions more distinct, the regions were ranked according to their success measured by the modified Boudeville typology of regions with respect to all three indicators: employment, fixed assets and GNP. The criterion for ranking was the number of successful or unsuccessful subperiods. The results of the ranking show that the observed interdependence is the most striking in employment, a bit less marked in fixed assets, and least in the case of GNP. Additionally, the difference between the most successful region and the least successful region are the most striking in regard to employment (the top regions have no unsuccessful subperiods, whereas the lowest ranking regions are successful in only one sub-period). The ranking of regions according to their performance in terms of employment growth resulted in the largest number of groups – six. Regional differences are narrower both in terms of fixed assets (there are four groups) and success (top regions have only one unsuccessful sub-period each, whereas the lowest ranking regions have two unsuccessful sub-periods each). The smallest interregional differences were observed in regard to the GNP: there are three groups only, the top group consisting of two regions with two unsuccessful sub-periods each and the lowest group consisting of four regions with three unsuccessful sub-periods each.

A rather strong connection between the success of a region and its level of development in the case of employment and fixed assets (the less developed a region, the greater the increase of the two indicators) suggests that regional policy had a strong impact on the growth of production factors in underdeveloped regions, but also that it was primarily directed toward them. If we consider how important employment is for keeping the social peace, which is one of the major objectives of regional elites, it is obvious why this connection is the most striking in the case of employment. With respect to the growth of the GNP as an indicator of success, this

connection is less noticeable. On the one hand, Kosovo-Metohia and Macedonia, the least developed regions, rank among the most successful ones, and Slovenia and Croatia, the most developed regions, among the least successful ones, still, on the other hand, the least successful regions also include Bosnia-Herzegovina and Montenegro, while central Serbia ranks among the more successful regions. This only shows that GNP growth is not merely dependent on the factors of production growth but that it is determined to a large degree by their usage upon which, in turn, the federal regional policy since 1965 had no influence whatsoever.

Similarly, results of the shift-share analysis of labor productivity and the output-capital ratio show that: a) there is a strong connection between a region's level of development and its success (measured by the difference between the regional and the average efficiency), here in terms of a positive correlation between the two;

b) the differential shift has a decisive effect on the success of regions, and its effect is positive with developed regions and negative with the underdeveloped ones; and c) differences in the sectoral structure of regions have no significant influence on the differences in their success.

The developed regions fell into the most successful or predominantly successful regions, while the underdeveloped regions fell into the predominantly unsuccessful category. The differences between the most successful and the least successful regions are wide: in no year was the efficiency of successful regions below the Yugoslav average, while the efficiency of the least successful regions in no year exceeded the Yugoslav average.

In terms of labor productivity regions are grouped as follows: successful regions (Croatia and Slovenia), occasionally (un)successful (Vojvodina, central Serbia and Montenegro), and unsuccessful ones (Macedonia, Kosovo-Metohia and Bosnia-Herzegovina).

In terms of fixed assets efficiency regions are grouped into successful ones (Slovenia, central Serbia and Vojvodina), occasionally (un)successful (Croatia and Macedonia), and unsuccessful ones (Bosnia-Herzegovina, Kosovo-Metohia and Montenegro).

Relatively minor differences in the sectoral structure of regional economies, i.e. the small influence of these structural differences on the differences in regional efficiency can be explained by an ambition of macroeconomic decision-makers of almost all regions to obtain, if at all possible, everything that Yugoslavia already possessed so that "one day" regions could function as sovereign independent states. Moreover, the completion of regional economic structures was carried out according to the overall Yugoslav model of socialist industrialization. The desire to achieve selfsufficiency, in the absence of either strong economic incentives or coercion which could induce radical structural changes, led, among other things, to the self-reproduction of the "original" economic structure of regions ("a little bit more of the same"). According to the law of inertia, in an environment dominated by semi-natural, technological and "agreement-based" (arbitrary) investment criteria,

with a lack of innovation and a strong aversion to risk, necessary structural adjustments fail to occur. Where there are no structural changes, there are no qualitative changes either. The absence of dynamism in institutional arrangements affected the structure of regional economies: a rigid system resulted in a rigid structure which, in turn, had a minimal effect on efficiency.

A comparison between the results obtained by ranking regions according to their efficiency and those obtained by ranking regions according to the achieved growth of production factors (employment and fixed assets) and GNP growth clearly indicates that there was a rapid growth of production factors in underdeveloped regions. This growth was made possible by an abundant inflow of capital. However, the way in which capital flowed into regions (automatically and without any control by the donors over its use or investments efficiency) and the environment in which it was used (soft budget constraint, socialization of investment risks, zero or minimum price of capital, institutional and non-institutional pressure from the unemployed population, etc.) inevitably led to non-productive employment, i.e. inefficient investment. In other words, rapid growth of production factors in year t did not provide the basis for self-increase in year $t+1$ but, instead, created a need for increased external capital in year $t+1$ in order, first, to preserve the existing (inefficient) economy and, second, to ensure new (inefficient) growth.

KEY WORDS

shift-share analysis, Yugoslavia, its republics and provinces,
1952–1990, regional disparities, structural changes, regional growth,
GNP, employment, fixed assets,
structural shift, differential shift, pure (net) differential shift, allocation effect,
Boudeville's typology of regions,
efficiency, labor productivity, output/capital ratio

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