# The Past and the Future of Czecho-Slovak Economic Relations

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The arrangement of economic relations between the Czech and Slovak republics is one of the critical steps in Czechoslovak economic transformation. Due to the different historical records of the Czech and Slovak economies both of them are characterized by certain specific structural features. As a result, the impact of economic reform in Slovakia is much more painful compared with Czech lands. Economic separation, however, could even aggravate this problem, and so a more reasonable policy would be to maintain a common state.



## 1. Introduction

Economic relations between the Czech and Slovak republics became one of the critical issues in the process of economic reform in Czechoslovakia. It is an element increasing the uncertainty and instability that characterize the period of transition to market economy. It affects the reputation of Czechoslovakia abroad and influences the willingness of foreign capital to participate in the Czechoslovak economic transformation.

It is of course not only its internal development that influences the future of Czecho-Slovak economic and political relations. Recent developments abroad are important as well. The case of Yugoslavia, especially, the disintegration of the Soviet Union, and perhaps even the efforts of Quebec to gain more independence could play a role as factors stimulating the Czecho-Slovak solution. The attitude of the international community in these cases could have an effect on paving the way for Czechoslovakia.

In the past, the problem of Czecho-Slovak economic relations was seldom analyzed in economic literature and furthermore was highly politicized. The process of Slovak industrialization and of catching up with the Czech economy was a political issue avoided by economists and those publishing articles on the problems. There were, however, some issues analyzed in more depth, one of them being the calculation of national income in both republics. Inaccurate statistical data provoked some authors to attempt to improve them. In one of the early articles on this theme, the data were adjusted to take into account temporary migration of the labor force and interregional and international tourism. [1. pp. 721-740] Another improvement was the calculation of national income created within foreign trade. In the official data, the impact of foreign trade on national income in the republics was absent. The adjusted data enabled one to calculate more precisely the transfer of sources between the republics [see 2].

There was one interesting feature characteristic of existing economic literature on Czecho-Slovak economic relations. Slovak authors argued that, in spite of the catch-up process, some differences between the republics still persisted with regard to the level of economic and social development, and that further redistribution of sources from the Czech republic (CR) to the Slovak republic (SR) was necessary [3]. Czech economists, however, arrived at the conclusion

that by the early 1980s the process of catching up was completed [4, p. 825]. This controversy has currently become not only an economic issue but also a political one shaping the discussion of future Czecho-Slovak relations.

In this article an attempt is made to analyze Czecho-Slovak economic relations in more complexity. In the first part, the past record of the economic coexistence of the Czechs and Slovaks in one common state is briefly reviewed. The basic hypothetical alternatives for the future are then identified. The description of specific features of the Slovak economy, which are often mentioned as an argument for greater independence, follows. Finally, the costs of separation and the economic prospects for each of the republics if separation occurs are discussed.

### 2. The History

#### a. Between the Wars

Czechoslovakia came into existence in 1918 as a combination of two substantially different economies, the developed industrial Czech lands, and backward agrarian Slovakia. The difference was striking especially in industry. Slovakia covered some 36 percent of the area in the new state; its share of the population was approximately 23 percent, but it produced a mere 8 percent of Czechoslovak industrial output and in addition was of poor quality. In Czech lands, by contrast, in the years between the wars, such firms as Skoda, Aero, Tatra, Praga or Bata matched their European competitors in technology and efficiency. High levels of development characterized light industry, production of consumer goods, food and beverages, as well as services including tourism. Even in agriculture, where the only significant comparative advantage for Slovakia was represented, the Czech lands reached higher results in absolute terms. According to estimates, productivity in agriculture in Slovakia represented approximately 60 percent of the level reached in Czech lands.

In aggregate, the differences in the level of economic development in the Czech and the Slovak republics are expressed by the data on national income. As estimated, the share of Slovakia in total volume of national income in Czechoslovakia was less than 12 percent, which represents some 42 percent of per-capita levels in Czech lands.

It is characteristic of the two interwar decades that the gap in economic performance did not change. The Czechoslovak economy was functioning in a

market environment, while the government didn't pursue any special regional policy in order to change the above disproportion. After all, in the newly created republic and during the economic crisis of the 1930s, there was not much space for such activity. At the same time, the Czechoslovak private sector quite naturally preferred investment in Czech lands. Thus, in spite of some economic growth in Slovakia, economic differences with Czech lands persisted, and in the second half of the 1930s the relative economic position of Slovakia in the republic was not much different from the situation in 1918.

Table 1

Czech Lands and Slovakia in 1937: Percent of Selected Economic Indicators and Per Capita

Outputs

|                         | CSR | Czech lands  | Slovakia |
|-------------------------|-----|--------------|----------|
| Population              | 100 | <b>7</b> 5.5 | 24.5     |
| National income         | 100 | 88.0         | 12.0     |
| NI per capita           | 100 | 117.0        | 49.0     |
| Industrial output       | 100 | 92.2         | 7.8      |
| IO per capita           | 100 | 122.0        | 32.0     |
| Agricultural production | 100 | <i>7</i> 7.7 | 22.4     |
| AP per capita           | 100 | 102.8        | 91.4     |
|                         |     |              |          |

Source: Fakta o vztazich ceské a slovenské ekonomiky (Facts about Relations of Czech and Slovak Economy), Hospodarske noviny, 24.4.1991

#### b. The Second World War

The Second World War represents a clear turning point not only for Czecho-Slovak political relations but also for economic relations. Two facts were important from the economic point of view. On one hand, the economic potential of Czech lands, or rather protectorate, was incorporated into the German military industrial complex and mercilessly exploited without any significant efforts to recover and modernize the production capacity. The Slovak economy, on the other hand, was supported by Germany up until 1944 with the idea of creating an "isle of welfare" in Eastern Europe.

The second important factor following the war that influenced the development of the Czech economy was the postwar displacement of Sudeten Germans. In prewar Czechoslovakia, the Germans were not only an important

demographic and political entity (in 1930 they represented 22.5 percent of the Czechoslovak population, whereas the Slovaks—excluding the Hungarians, Ukrainians and Russians—only 15.7 percent) but they were an economic power as well. Their postwar displacement decimated the relatively well-developed Sudeten industry.

As a result, in the postwar period the Slovak economy entered the new Czecho-slovak republic economically much stronger than in the prewar period. In 1948 the share of Slovakia in national income reached 19.2 percent, 13.2 percent in industrial output, and 30.7 percent in agricultural production. Significant progress was made in infrastructure, education, and administration. Immediately after the war, encouragement of the industrialization of Slovakia started and the process of economic catching up became a part of official economic policy.

#### c. After 1948

During the whole postwar period, the Slovak economy grew more rapidly under the conditions of central planning as compared to Czech lands. Between 1948-1989, national income in the Slovak republic (SR) increased more than 11 times, whereas in the Czech republic (CR) it increased only 6 times. Labor productivity in the SR increased nearly 7.5 times and in the CR approximately 5.3 times. Especially in industry the development was dynamic. Whereas in the CR industrial output increased 12 times, in the SR it increased nearly 33 times. Agriculture grew in Slovakia more rapidly as well.

Toble 2

|   |         |            | Table 2 |            |      |      |
|---|---------|------------|---------|------------|------|------|
| Economic Growth in the CR and the SR in Postwar Period (1948=100) |         |            |         |            |      |      |
|   |         | 1948       | 1960    | 1970       | 1980 | 1989 |
| National income:  | CR      | 100        | 245     | <b>364</b> | 536  | 616  |
|   | SR      | 100        | 311     | 536        | 887  | 1132 |
| NI per capita:  | CR      | 100        | 225     | 331        | 462  | 526  |
|   | SR      | 100        | 268     | 409        | 612  | 740  |
| Industrial output:  | CR      | 100        | 349     | 584        | 955  | 1167 |
|   | SR      | 100        | 523     | 1200       | 2504 | 3251 |
| Productivity in ind-y:  | CR      | 100        | 260     | 415        | 688  | 837  |
| <b>y</b>  | SR      | 100        | 318     | 498        | 842  | 1058 |
| Agricultural output:  | CR      | 100        | 130     | 157        | 191  | 221  |
|   | SIR     | 100        | 143     | 178        | 221  | 259  |
| Productivity in agr-e:  | CR      | 100        | 190     | 288        | 450  | 575  |
| , 0   | SR      | 100        | 235     | 357        | 604  | 780  |
| Source: Calculated fr   | rom 9., | pp. 40-49, | 56-65   |            |      |      |

As a result, the levels of economic development in Slovakia and the Czech lands gradually equalized. By the end of the 1970s the gap nearly disappeared.

The structural character of the Slovak economy was changing as well. In 1948 the share of industry in the total output was 43 percent. In 1989 it exceeded 68 percent. The share of agriculture, by contrast, dropped from 37 to 13 percent. Important structural changes occurred on the industry level. Several new industries were built and the Slovak industry became an important supplier of many industrial products.

Table 3

The Process of Catching Up

| Slovakia's share in         | 1948 | 1960 | 1970 | 1980 | 1989 |
|-----------------------------|------|------|------|------|------|
| Population                  | 27.9 | 29.3 | 31.6 | 32.6 | 33.7 |
| National income created     | 19.2 | 23.5 | 28.5 | 29.0 | 30.4 |
| National income used        | 21.5 | 25.6 | 29.6 | 31.6 | 32.0 |
| Gross agricultural output   | 29.3 | 31.3 | 31.9 | 32.3 | 32.6 |
| Gross industrial output     | 13.5 | 18.9 | 24.0 | 28.9 | 29.5 |
| Labor productivity (CR=100) | 62   | 81   | 91   | 92   | 96   |

Source: Historická statistická rocenka CSSR, (Historical Statistical Yearbook of CSSR) SNTL, Prague, 1985, pp. 454, 456, 495, 519, 655, 657, 696, 720, 9. pp. 40—43, 56—59, 141, 145, 360

In some cases (e.g., the production of refrigerators, freezers, color televisions, and certain chemicals), all of the Czechoslovak productive capacity is located in Slovakia. However, it is necessary to mention that its strategic location close to the Soviet Union influenced the structural development of Slovak economy. The location conditioned the development of Slovak heavy industry, metallurgy and the arms industry, a heavy burden for Slovakia to this day.

The development of the production potential in Slovakia was accompanied by a growth in the standard of living. In a number of its indicators Slovakia matched the Czech lands and in some of them it even surpassed the levels reached in CR. The average wage, for example, represents, by the end of the 1980s, 99.1 percent of the levels reached in the CR, personal consumption 91.7 percent, and the number of university students per 1000 inhabitants 105.7 percent. It should be added as well that the levels of environmental pollution in Slovakia are much lower as compared with the Czech lands. The values of the main

emission indicators in Slovakia are one-half or even one-third of those in the CR.

What were the sources of the rapid development of the Slovak economy? First, one was the high rate of investment: between 1948-1989 the volume of investment in the SR increased nearly 18 times, whereas in the CR only 15 times. During the whole postwar period the share of gross investment in national income in Slovakia significantly exceeded the same indicator in CR. As a result, the amount of fixed capital grew more rapidly in Slovakia and at the same time its age structure was more favorable.

Table 4

Gross Investment as Percent of Regional Income

|    | 1951-55 | 1956-60 | 1961-65 | 1966-70 | 1971-75 | 1976-80 | 1981-89 |
|----|---------|---------|---------|---------|---------|---------|---------|
| CR | 20.9    | 24.3    | 24.8    | 26.7    | 29.6    | 30.4    | 30.5    |
| SR | 34.8    | 36.1    | 38.1    | 36.2    | 39.3    | 39.0    | 36.7    |

Source: Historická statistická rocenka CSSR (Historical Statistical Yearbook of CSSR), SNTL, Prague 1985, pp. 456, 483, 657, 684, 9. pp. 40—43, 56—59

Table 5

The Age Structure of Machinery and Equipment, June 30, 1987 (Percent by Age Intervals by Republics)

|          | Age inte     | rval (years) |              |             |              | Average age |
|----------|--------------|--------------|--------------|-------------|--------------|-------------|
|          | 0-5          | 6-10         | 11-15        | 16-20       | over 20      |             |
| CR<br>SR | 31.9<br>33.1 | 26.4<br>28.3 | 16.8<br>17.7 | 9.5<br>10.0 | 15.4<br>10.9 | 11.0<br>9.8 |

Source: Statistical Yearbook of CSSR 1988, SNTL, Prague, 1988, pp. 239—240

The rapid growth of employment was another important factor in Slovak economic development. Between 1948-1989, total employment in the SR increased by 65 percent, as compared with 35 percent in the Czech lands. Industrialization created many new labor opportunities, especially in industry and the infrastructure resulting in structural changes in total employment. The share of agriculture in total employment decreased in the above period from 60.6 to 12.2 percent, and the share of industry increased from 14.9 to 33.5 percent. These trends were accompanied by the increases in educational level

of the labor force, which, measured by the indicators of formal education achieved, exceeded even the Czech levels. In 1989 in Slovakia, 36.1 percent of the labor force had a high school or university education, as compared with 31.7 percent in the CR.

In addition to the high rate of investment, the rapid growth of employment, and structural changes, the redistribution of national income created in the CR for use in the SR was an important factor in the catch-up process. At present it is a delicate political problem.

The transfer of resources has been demonstrated in several studies that show that the national income used in Slovakia repeatedly exceeds the national income here created. Various alternative calculations estimate the amount transferred at the level of 10 billion KCS per year in the 1970s and in the first half of the 1980s, and 5 billion KCS in the second half of the 1980s.

Transfer of Funds from CR to SR: Alternative Calculations

| Period     | Total transfer<br>bill. KCS c.p. | Transfer as % of<br>NI created NI used<br>in CR in SR |
|------------|----------------------------------|---|
| 1. 1950-60 | 48.4                             | 4.4 14.7  |
| 1961-70    | 80.4                             | 5.2 14.1  |
| 1971-80    | 124.0                            | 4.5 10.3  |
| 1981-88    | 86.1                             | 3.1 6.8   |
| 2. 1950-59 | 44.2                             | 14.8  |
| 1960-69    | 68.7                             | 12.6  |
| 1970-79    | 106.2                            | 9.1   |
| 1980-89    | 85.3                             | 5.2   |
|            |                                  | <b></b>   |

Source: 2, pp. 966.

For Slovakia the transferred funds helped to reach both high levels of investment and personal consumption, which on the average, in the 1980s, represented 92 percent of the level reached in the CR. The transfer was part of a regional policy, and it is estimated that with its support the SR succeeded in reaching the current level of its development in half the time otherwise needed. However, as a result of the SR approaching or exceeding the CR in the

previously discussed economic indicators, it may be appropriate to reexamine this regional development strategy.

#### d. The Lesson Learned

The described development of Czecho-Slovak economic relations in the past seventy years is important not only with regard to the development of certain material proportions of the Czecho-Slovak economy. It is very important, we believe, also with regard to the shaping of certain approaches to economic policy, economic institutions, and economic reform in general.

To summarize briefly the past seventy years: the Czechs were relatively successful in economic terms during the interwar period. A market economy operated then in Czechoslovakia, and the Czech economy, measured by its performance, was an integral part of Europe. The war economy was a bitter experience for the Czechs. In the postwar period a gradual relative economic decline occurred, along with a gradual loss of original economic position, and a fall among other East European economies.

From the viewpoint of Slovakia, the economic development of the past seventy years was diametrically different. In spite of some economic growth in the prewar period, the big economic gap between the Czech lands and Slovakia persisted, and in the second half of the 1930s Slovakia remained on the economic periphery of the republic. The Second World War meant for Slovakia not only "independence," but in a sense successful economic development as well. By the end of the 1940s it entered the new common state much stronger, as compared with the prewar situation. The postwar industrialization of Slovakia and the past 40 years of central planning are, then, a period of rapid economic growth and catching up with the levels of economic development in the Czech lands. One Slovak generation has seen Slovakia change from a backward agrarian country to an industrial economy, a process accompanied by a rapid growth in the standards of living. To exaggerate slightly—what happened in Slovakia was, by the standards of Eastern Europe, an economic miracle.

This historical experience of the Czechs and Slovaks is reflected in approaches toward economic reform and influences the current discussion on the future institutional shape of the economy. In the Czech lands, after forty years of

centrally planned economic decay, the radical move to the market economy gets quite natural support, whereas Slovakia is more inclined to look for a social economic model for its future development. There is less criticism in Slovakia with regard to government intervention in the economy because, after all, it was this factor that contributed to Slovak growth.

#### 3. The Future

#### a. The Alternatives

Speculating on the future political and economic arrangement of the CSFR, we can envisage several alternatives more or less likely, in different degrees, to prove acceptable to the Czechs and Slovaks and to be efficient in economic terms. First we will enumerate these possible alternatives; then we will group them into three main variants of possible future development. There are only slight or formal differences among some of the subvariants, which are as follows:

- a) current federation;
- b) federation based on a new agreement between the republics with the intention to maintain it;
- c) federation based on a new agreement anticipating gradual separation;
- d) formal federation, when the agreement is rather formal or not respected by the republics;
- e) confederation;
- f) constitutional agreement on separation of republics;
- g) unilateral declaration of independence by one of the republics.

The three main variants of possible future development are as follows, starting from the situation of a functioning federation: For us it is represented by a unitary federation with unified principles of economic reform (and, more generally, economic policy) for the whole of the state, and a strong central government having enough power to formulate the main parameters of economic policy. Unitary federation does not, of course, mean that all decisions about concrete policy measures are made in one place. To simply somewhat, the task of central government is to formulate the basic principles of economic policy and the realization of typical federal policy measures. For example, in the field of fiscal policy the unitary principle does not mean that all income from

taxes and all budget outlays concentrate on the federal level. The taxes are collected and the budgetary expenditures spent on that place where it is most reasonable. It is important, however, that the fiscal system be organized in accordance with uniform principles. This unity of principles of economic policy does not exclude certain discretion with regard to individual instruments of economic policy and their use in the concrete situation of republics. Various supplementary taxes and a different structure of subsidies might be a good example. These differences, however, should not exceed a certain critical level and become inconsistent with general principles of economic policy. For example, differences in the restriction of monetary and fiscal policy, diametrically different tax systems, and basic differences with regard to price liberalization could affect efficiency.

The situation of unitary federation seems to us optimal from the viewpoint of chances of achieving the goals of economic reform. On the one hand, it creates preconditions for the formulation and realization of a unified and efficacious economic policy. On the other hand, such a situation is transparent for the foreign financial and business sphere, which contributes to greater confidence in the Czechoslovak economy. The blueprint of economic reform was prepared for the situation of unitary federation.

In formal terms, the criteria of a unitary federation are met to some extent by the current arrangement in Czechoslovakia, and they could be met by a federation based on a new agreement between the republics. The basic problem of such an agreement (and the development in Czechoslovakia up until now is good evidence) arises in connection with the distribution of powers between the federation and both republics. Public opinion polls indicate that most of the population in Slovakia would prefer a slowdown of the pace of economic reform. In this situation we can expect that the Slovak political representation will strive for a distribution of powers that would enable her to influence the realization of economic reform in Slovakia decisively. This is in sharp contrast, however, with the attitude of the federal government and even the Czech government. The competence disputes (as they are called in Czechoslovakia) may thus become a stumbling-block in the efforts to maintain the federation, and they may lead to only a formal agreement between the republics. In general, unitary federation is more acceptable for the Czech part, and less acceptable for Slovakia.

On the opposite end of possible variants is immediate economic separation. Such separation may take different forms. It may lead to a situation characterized as economic war, when the republics stop supplying various strategic inputs to each other, when the access to each other's market is limited, the tariff barriers are created, and retaliatory measures of trade and industrial policies are initiated. Unilateral declaration of independence by one of the republics might be the beginning of such a scenario.

However, the process of achieving greater independence may take a more civilized form and can be based on reasonable agreement. It may lead to a situation where the formulation of economic policy and the strategy of economic reform is the responsibility of the republics. Nevertheless, there is no such instance of breaking economic links, and economic cooperation is stimulated by some sort of harmonization of economic policy, creation of trade, or customs union. This situation seems very pragmatic, i.e., politically acceptable and economically efficient. There are some examples of similar arrangements in the world economy that have proven their viability. One is Benelux, representing a highly integrated economy and, at the same time, political sovereignty.

The consequences of separation should be evaluated according to the form of this process. In the first place, the immediate separation of republics would be a strong shock for both economies, and some sort of adjustment of economic reform would obviously be needed, including the necessity of accepting some extraordinary measures in order to overcome problems arising in several fields. In some spheres even a collapse is possible. The separation based on agreement would have serious consequences in the short term as well.

In any separation, however, the impact of this process in both republics would be different. Due to reasons specified later in this article, the impact on Czech lands would be much less painful than on Slovakia.

Between the variant of functioning federation and the variant of economic and political separation, there are several other possible solutions. For example, there is the possibility of a federation, which, in accordance with the concluded agreement, is supposed to fall apart gradually. In this instance, the process of distribution of powers between the republics could be accelerated. Economic development in the republics would be influenced by the anticipated separation. The common economy would be understood by the economic

subjects as a temporary solution, and efforts to find new suppliers and customers might increase. In a sense this process would be just opposite to that which is currently underway in Europe, where all economic activities are influenced by expectation of further economic integration and the creation of European economic space.

Another possibility is a situation where an agreement is concluded between the republics, one, however, purely formal, dealing with only a limited number of problems and leaving to the republics considerable economic independence. An even worse case results when the republics do not respect this agreement. Such a situation is probably the best illustration of a nonfunctioning federation, i.e,. a situation when, in a formal sense, there is one economy with one currency and one tariff system, and at the same time there are important differences in the economic policy of the republics. As a result, the unity existing still in some fields frustrates efforts toward economic policy in the republics, which is then ineffective. In a sense, the economic subject may avoid the impact of economic policy escaping to the other republic. Recently the symptoms of this disease were identified, for example, in the discussions concerning agricultural and trade policy. The differences in these fields in the republics, i.e., in the levels of prices for agricultural products and in export licensing, would have the result, initially, that economic subjects would buy or sell agricultural products in those republics where this would be more advantageous, and in the second case they would found their subsidiaries in a republic that liberalizes its exports to a greater extent. In this way the economic subjects would succeed in avoiding the impact of policy measures on their home economy.

In order to restrict such behavior, governments at certain times take measures hindering this escape, e.g., by separation of currency and by trade barriers and limitations on the transfer of capital. After a period of considerable inefficiency the nonfunctioning federation ends up in final separation.

Confederation, too, as a solution for Czechoslovakia has its principal defects. Economic efficiency of this Czecho-Slovak arrangement would depend on the agreement on which elements of economic policy are the responsibility of the confederation and which remain the responsibility of the republics. The basic dilemma of powers thus persists. Historical experience illustrates pretty well that confederations never represented long-term stable solutions. There was usually some sort of intermediate stage on the way to a common state or to its

dissolution. Confederations never succeeded in forming an effective executive power and a viable central government. When, by contrast, Czechoslovakia needs in our situation a long-term, stable, and clear solution, confederation does not represent an effective arrangement. In principle it suffers from similar defects as a certain form of economic separation or nonfunctioning federation.

Thus, the two worst variants of future economic arrangement of the CSFR are an immediate separation accompanied by a break in economic links and a nonfunctioning federation. There is, however, a difference between these variants. The first variant is unfavorable in the short term. After an initial shock, both economies may adapt to the new situation and find their new place in the international economy. As we have already indicated and will later analyze in more detail, the prospects of the CR and the SR are different in this case.

The nonfunctioning federation, however, may be an ineffective solution in the long term. If the expectations of future separation are strong enough, even short-term stability, which otherwise might be thought an advantage of this arrangement, may be broken. The nonfunctioning federation may, in this connection, be accompanied by supplementary socio-economic costs, by a loss of confidence among the population in economic reform and the ability of government to realize it, and by a loss of confidence in the foreign financial and business sphere. The nonfunctioning federation thus seems to us to be an even worse solution as compared with sudden economic separation.

| Table 7 |  |   |  |  |  |  |
|---------|--|---|--|--|--|--|
|         | The possible variants for Czecho-Slovak economy  |   |  |  |  |  |
| Variant |  | Economic Consequences   |  |  |  |  |
| a.      | Unitary Federation<br>(current state or a new<br>agreement between<br>republics)                                     | <ul> <li>good preconditions for economic reform</li> <li>regional problems solved via regional policy</li> <li>unity and stability of economic policy, "clear rules of the game" are given</li> <li>confidence abroad</li> </ul>  |  |  |  |  |
| b.      | Transient Federation<br>(based on agreement<br>anticipating future<br>separation or formal<br>unrespected agreement) | <ul> <li>great uncertainty and instability</li> <li>in short term the problems due to economic separation are postponed</li> <li>the problem of responsibilities of governments arises</li> <li>bad prospects for economic reform</li> <li>inefficient in economic terms in the long term</li> <li>loss of confidence abroad, which affects international economic aid</li> </ul>   |  |  |  |  |
| c.      | Confederation  | - transient unstable solution with similar problems as in b)  |  |  |  |  |
| d.      | Separation of republics<br>by agreement  | <ul> <li>the intensity of the short-term shock depends on the extent of separation</li> <li>the disputes between the republics with regard to their powers are put to an end</li> <li>good preconditions for the formulation and realization of clear economic policy in the republics</li> <li>confidence abroad restored in the longer term</li> <li>different impact on CR and SR, differentiation of economic policies, different future development</li> </ul> |  |  |  |  |
| e.      | Uncontrolled<br>unilateral separation  | <ul> <li>severe shock or even collapse in the short term</li> <li>a basic adaptation of economic reform is needed (especially in Slovakia)</li> <li>different impact in CR and SR</li> <li>economic retaliatory measures possible</li> <li>loss of confidence abroad</li> </ul>   |  |  |  |  |

# b. Specific features of the Slovak economy

The so-called specificities of the Slovak economy play an important role in discussions concerning the economic arrangement of Czechoslovakia as an argument for adjustment of economic reform. These structural specificities are the result of past formation of the Slovak economic potential, and resulting integration of the Slovak economy with the Czechoslovak economy and international economic relations. It is reasonable to expect that these structural specificities influence the economic transformation of the region and that certain developments in the external environment will affect regions with

differing economic structure in a different way. It would, however, be inadequate in all such cases to reformulate economic reform or even strive for economic independence. A more reasonable approach is the application of structural and regional policies.

What are, actually, the specific features of the Slovak economy? Up until now they were formulated in a rather vague way. Usually mentioned are the following:

- a) Slovak industries operate generally in the initial stages of the production process; they produce intermediate goods to be further manufactured in the Czech republic. The Czech industry, by contrast, produces more final goods;
- b) the Slovak economy is more import-oriented; the imports from former CMEA countries and especially the Soviet Union play an important role in the structure of Slovak imports; in the form of intermediate goods supplied by Slovak producers these imports flow to the Czech economy;
- c) production of traditional arms is an important industry in Slovakia;
- d) the market of the former CMEA is for Slovakia more important than for Czech lands with regard both to imports and exports;
- e) in spite of the level achieved in economic equalization the efficiency of production and exports in Slovakia is lower compared with the Czech economy.

Let us try to verify the above-mentioned specifics. First we shall analyze the level of finalization of produced goods. The differences between the CR and the SR in this respect are often mentioned. However, if we use available data we shall find that these differences are not so easy to prove, and some data even indicate that the differences oppose the general belief.

Using the data of Table 1 in the Appendix, we cannot categorically state that the industries producing for further manufacturing are more predominant in the Slovak economy than in the Czech economy. It is true that the share of such industries producing for production use, as in construction materials or the paper industry, is higher in Slovakia as compared with the CR. However, in the CR the share of other intermediate goods-producing industries is higher, as, for example, in metallurgy. The data from Table 2 in the Appendix further show that in many Czech and Slovak industries the Czech industries are oriented

more to the production of intermediate goods. This difference is significant, especially within chemical and rubber industries and within the production of construction materials. In the aggregate of 16 out of 30 industries in the table, the share of production for producers' use was higher in the CR as compared with the SR. These data indicate that the oft-repeated argument about the low level of finalization of Slovak output is not valid. Also, the aggregate data calculated on the basis of the input-output table for 1987 and the structural balance of sales in 1989 show similar evidence, indicating that the shares of final and intermediate goods in both republics were similar.

Table 8

The Structure of Output in 30 Industries Classified According to Use In %

|                                       | CR    | SR    |
|---------------------------------------|-------|-------|
| Total                                 | 100.0 | 100.0 |
| of which:                             |       |       |
| producers' use                        | 51.4  | 50.8  |
| personal consumption                  | 15.5  | 16.4  |
| social consumption                    | 4.9   | 4.9   |
| investment                            | 8.7   | 10.5  |
| change in inventories                 | 1.7   | 1.1   |
| exports                               | 17.0  | 17.1  |
| of which western countries            | 5.2   | 4.1   |
| transfers between republics (balance) | 0.5   | - 1.1 |
| total final use                       | 48.2  | 48.9  |
| losses and statistical discrepancies  | 0.4   | 0.3   |

Source: Calculated from 5., pp. 91, 170

Table 9
Structure of Sales of Czech and Slovak Enterprises Classified According to Use [n%]

|  | CR   | SIR  |
|--|--|--|
| Total sales<br>of which:   | 100.0  | 100.0  |
| investment internal trade exports to eastern countries exports to western countries nonproduction use sales organizations other producers' use | 4.6<br>15.7<br>7.1<br>5.7<br>4.0<br>13.1<br>49.9<br>45.4 | 3.3<br>16.9<br>8.1<br>5.9<br>4.6<br>11.1<br>50.1<br>45.8 |

Source: Calculated from: 6., pp. 27, 28, 37, 38

Another piece of interesting information is further provided by the data on the flow of Czech goods to Slovakia and Slovak goods to Czech lands. The data are in sharp contrast with the assertion about higher finalization of Czech output. Full 64 percent of Czech supplies to Slovakia are goods for further use in production, whereas in the case of Slovak goods supplied to the CR the corresponding number is 52.4 percent.

Let's analyze the other specificity of the Slovak economy, which is its higher import intensity. The data from the input-output table really indicate that, for Slovakia, the imports are more important as compared with the CR. The share of imports in total supplies for 30 industries in the economy represented in the SR are 14.9 percent as compared with 13.2 percent in the CR. The share of previous socialist countries in total imports was at the same time higher in Slovakia as compared with the CR. The data show that, in 1987, 72 percent of Slovak imports were from socialist countries as compared with 66 percent in the case of Czech lands.

[Calculated from 5., pp. 99, 105, 186, 192.] The input-output table data further indicate that the imports for producers' use especially from previous socialist countries (i.e., mainly the Soviet Union) were more important for Slovakia. The share of import for producers' use in total imports in 1987 in Slovakia was 73.5 percent and the share of imports for final use 26.4 percent. The corresponding data for the CR are 65.8 percent and 34.2 percent. The share of socialist countries in the case of imports for production use was 75 percent in Slovakia and 67 percent in the CR. Thus the data suggest that raw materials,

intermediate goods, and other commodities used in production which come to Slovakia especially from the Soviet Union represent a considerable item in the structure of Slovak imports.

Table 10

The Structure of Imports to the CR and SR according to Their Final Use in 1987

[in %]

|                       | CR          | SIR          |  |
|-----------------------|-------------|--------------|--|
| Total imports         | 100.0       | 100.0        |  |
| of which are:         |             |              |  |
| production use        | 65.8        | <b>7</b> 3.5 |  |
| personal consumption  | <b>7</b> .1 | 6.5          |  |
| social consumption    | 8.7         | 7.7          |  |
| investment            | 13.5        | 11.6         |  |
| change in inventories | 1.1         | - 0.6        |  |
| exports               | 3.8         | 1.3          |  |
| final use             | 34.2        | 26.5         |  |

Source: Calculated from: 5., pp. 99, 186

However, it is necessary to remark that in absolute terms the Czech economy imports in all categories of imports at least twice as many goods in comparison to Slovakia. Even with regard to territorial structure the imports from previous socialist countries are much higher. The total imports from socialist countries to the CR are higher by 82 percent and the imports for production use 67 percent higher as compared to the SR. A more detailed analysis would show differences among industries. Our attention was attracted especially by the extent of Slovak imports within the fuels industry, which represent some fourfifths of Czech imports within this industry. Their share in total Slovak imports for production use was a full 43 percent as compared with 28 percent in the CR [calculated from 5., pp. 99, 105, 186, 192]. Almost all of these imports were from the USSR. At present the territorial restructuring of imports of oil is underway and the share of Russia, which in the past was the monopoly supplier of oil to Czechoslovakia, is diminishing. The Slovak economy is nevertheless supposed to be still vulnerable to the disturbances in imports within this industry.

Another specific feature often mentioned of the Slovak economy is its high share of the arms industry, which became a problem after the decision to reduce arms considerably. Due to the character of this industry, detailed data are not available. The data that we have found scattered in the literature, however, enable us to draw the following conclusions. The production of arms

culminated in Czechoslovakia in 1987, when its share in total industrial output represented some 3 percent and the employed labor force within the industry amounted to some 100 thousand. In accordance with estimates, the share of Slovakia represented at least 60 percent of the production capacity. That means that the share of arms production in total industrial output represented less than 2 percent in the CR, whereas in Slovakia it was between 5-6 percent. It is now assumed that by 1992 the production of arms will be reduced to some 20 percent of its 1987 level. Especially in Slovakia the process should be rapid. Its share in total Czechoslovak output of arms should drop to less than 40 percent [8., p. 8]. Restructuring would thus mean that some 50 thousand labor places in Slovakia would be affected.

We are of the opinion, however, that rather than a problem of the republics the restructuring of the arms industry is a problem of regions. Besides central Slovakia where some 30 percent of the Czechoslovak labor force within the arms industry is employed, the reduction of the production of arms will affect southern Moravia, employing roughly 20 percent of the labor force in the industry, and Prague, where some 17 percent of the total labor force within the arms industry is employed.

Another structural specificity of the Slovak economy is the role which former CMEA countries play in Slovak external economic relations. We have already mentioned the role of imports from these countries to Slovakia. Let's now look at the exports. The input-output table data for 1987 indicate small differences between the share of exports to these countries in total flows of goods in the Czech and Slovak economy. The share of exports to the CMEA countries in total output was 13 percent in Slovakia and 11.8 percent in the Czech lands [calculated from 5., pp. 91, 170]. The structural balance of sales data show similar slight differences with regard to the importance of the external markets for the CR and the SR.

Table 11

The Shares of the CR and the SR in Total Czechoslovak Exports to the Socialist and Capitalist Countries

| [in %]            |            |                     |    |  |  |
|-------------------|------------|---------------------|----|--|--|
|                   | SC         | $\infty$            |    |  |  |
|                   |            |                     |    |  |  |
| CR                | 71.8       | 73.8                |    |  |  |
| SIR               | 28.2       | 26.2                |    |  |  |
|                   |            |                     |    |  |  |
| Source: Calculate | ed from: 6 | S., pp. 27, 28, 37, | 38 |  |  |

Not only the data concerning Czech and Slovak exports are interesting; the data for total sales are even more significant. They provide information on the markets for which each of the republics produces and the extent to which each economy depends. We may thus hypothesize how important the reduction or even loss of a certain market might be for each of the economies.

The data in Table 12 illustrate a small difference in the importance of external markets (both of the western and eastern countries) between the CR and the SR. The biggest difference, however, consists in the fact that for Czech producers the Czech market is far more important than the Slovak market is for Slovak producers. In other words, the Slovak economy depends on the sales in Czech lands much more than the Czech economy on sales in Slovakia. This fact constitutes one of our main arguments in the next part of the article, where we discuss the consequences of possible economic separation. Table 3 of the Appendix contains more detailed data on individual industries.

Table 12

The Territorial Structure of Sales of Czech and Slovak Enterprises in 1989
[m%]

|                             | CR   | SIR  | socialist<br>countries | capitalist<br>countries |
|-----------------------------|------|------|------------------------|-------------------------|
| Sales of Czech enterprises  | 75.8 | 11.5 | 7.1                    | 5.7                     |
| Sales of Slovak enterprises | 26.9 | 59.2 | 8.1                    | 5.9                     |

Source: Calculated from 6., pp. 27, 28, 37, 38

Last but not least, lower general efficiency of production and lower export performance are specific features of the Slovak economy. Indirect evidence is provided by the fact that the share of Slovakia in population is 33.7 percent, in the total labor force 31.8 percent, but in the created national income, however, only 30.4 percent. The data on industry and agriculture show similar differences. In the first case, the share of Slovakia in industrial employment was 27.9 percent, and its share in total adjusted output (= special indicator of output) 27.3 percent. The share of Slovakia in agricultural employment was 37.4 percent and in gross agricultural output 32.6 percent [calculated from 9., pp. 20, 25, 56-59, 353-4]. Table 13 illustrates the lower efficiency of firms in Slovakia in comparison with the CR, using selected financial data.

Lower export performance also characterizes the Slovak economy. The structural balance of sales for the year 1989 indicates that the so-called difference coefficient, which measures the relation between prices achieved on the external markets and the domestic prices, was 1.04 in the SR, as compared with 1.16 in the CR in the case of exports to former socialist countries; and correspondingly 0.97 as against 1.01 in the case of exports to western countries [6., pp. 27, 28, 37, 38]. The situation differs, of course, across industries, and Table 4 of the appendix shows that there are some industries within which Slovak exporters perform better, as compared with their Czech counterparts. The global figures, however, document the better general performance of Czech industry.

Table 13
Selected Financial Indicators in Czech and Slovak Enterprises in 1989

|     | Total costs<br>as % of total<br>output | Material costs<br>excl. depreciation<br>incl. nonmaterial<br>services as % of<br>total output | Materials and intermediate goods as % of total output | Wages as %<br>of adjusted<br>output |
|-----|--|---|---|-------------------------------------|
| CR  | 92.94                                  | 60.31   | 42.68   | 35.34                               |
| SIR | 94.36                                  | 61.21   | 44.24   | 37.22                               |

Source:14., pp. 172, 175

# A summary of the above is as follows:

- 1. We did not succeed in proving that the Slovak economy is more oriented toward the production of less finalized goods compared with the CR.
- 2. The Slovak economy is slightly more import-intensive in comparison with the Czech economy. The former CMEA countries, and especially the USSR, play a decisive role in Slovak imports. At the same time, imports for production use are more important in the case of Slovakia, in comparison with the CR.
- 3. The share of industries producing arms is higher in Slovakia and the reduction of arms production might affect some 50,000 labor places. However, rather than a problem of the whole Slovak republic, it is a problem of certain regions.
- 4. The main difference between the CR and the SR with regard to the territorial structure of their sales is the fact that for Slovak economy the

- Czech market is far more important than the Slovak market for the Czech economy.
- 5. Lower general efficiency and lower export performance as compared with the Czech economy characterize the Slovak economy as well.

## c. Separation—Economic Implications

It is true that the process of economic reform, as well as the development in external environment, affect the Slovak economy more adversely in comparison with the Czech economy. The disturbances in the supplies of strategic raw materials from the Soviet Union, the economic decline in the former CMEA countries, and the changes in the payment conditions among these countries represent for Slovakia—due to its structure of external economic relations—a more important factor than in the CR. The reduction of arms production affects the Slovak economy to a greater extent as well.

For some politicians and economists in Slovakia, the structural specificities of the Slovak economy and the different impact of economic reform are an argument for the adjustment of economic reform, for greater economic independence and even separation.

What consequences could the eventual separation have? Let's imagine a situation which is not very far from that developed in the former CMEA after their disintegration and decomposition of the past mechanism of external economic relations. We shall assume that the separation would lead to a 50 percent loss of mutual markets. The already mentioned data show that roughly 11.5 percent of goods produced in the CR were supplied to the SR, as compared with 27 percent of total Slovak output being supplied to the CR. Due to this greater "openness" of Slovakia in the Czecho-Slovak relation, the impact of the above-mentioned development for the Slovak economy would be much more painful. In the CR, without taking into account the multiplier effect, it would influence less than 6 percent of total sales, whereas in Slovakia it would be over 13 percent. This development would be very dramatic in the SR especially in metallurgy, the chemical and oil industry, rubber industry, heavy machinery, medical supplies, paper and electrotechnical industry and even the clothing industry. For all of these industries the CR is an important, if not the main, market.

In 8 of 22 industries, in Table 3 of the Appendix, the share of the CR in the sales of Slovak enterprises was more than 40 percent. However, in the case of Czech producers, in all analyzed industries the unambiguously dominant market is the Czech economy. More than 20 percent of total sales of Czech enterprises is supplied to Slovakia only within the gas industry and the chemical and oil industries.

A simple calculation indicates that the above-described loss of markets could affect up to 150,000-200,000 working places in the CR and a similar number of working places in Slovakia, which is also without a doubt much more painful for Slovakia.

At the same time, the reverse impact of the break of economic links, i.e. the loss of important inputs supplied from the other republic, is important. Under the assumption that all the lacking supplies would have to be secured from third countries at world prices, and at the same time only half of the excess amount of goods previously supplied to the other republic would be possible to sell in other markets, the deficit of the balance of payments in each of the republics could increase by some 100 billion KCS, or 3.3 billion dollars. As a result, the foreign debt would increase, and there might be a shortage of funds for alternative uses, which could slow down the process of economic transformation.

There might, however, be other impacts from a separation of the republics. It has already been mentioned that during the postwar period resources created in the CR were transferred for use in Slovakia. At the end of the 1980s, these transferred funds represented approximately 3 percent of the national income created in the CR and nearly 7 percent of the national income used in Slovakia. After separation these transfers would cease, and the CR would be richer by the amount of transferred funds and the SR poorer. In practice this means that, for example, net investment in the CR might increase by some 16 percent and in Slovakia decrease by some 30 percent, and that some taxes in the CR could be lowered and in Slovakia raised. It means that the level of personal consumption in the CR could increase and in Slovakia decrease, which at present could influence the attitudes of the population towards economic reform. In short, this development could be an important factor accelerating economic transformation in Czech lands and decelerating it in Slovakia. We have already mentioned the higher efficiency of exports from the CR and higher

competitiveness of Czech exporters. It would significantly influence the prospects for integration of the republics in the European economy. The competitiveness of Czech exporters would enable accelerating the process of opening the Czech economy, removing various surviving protectionist measures, and even revaluating the KCS without fears that this move would lead to some balance of payments disequilibrium. This development could favorably influence the aggregate price level in the economy, the economic position of importing and other enterprises as well, and, in the end, the standards of living.

In Slovakia the situation would be just the opposite, of course. A move toward more protectionism would be likely, supported by strong industrial lobbies in the arms industry and inefficient enterprises in heavy industry. The result would be a deceleration of the process of integration into the European economy, difficult access to western markets in competition with other East European countries, possible problems in the balance of payments, and deterioration of reputation in international financial and business circles.

Furthermore, the Czech lands are ahead with regard to the inflow of foreign private capital. Most of the existing joint ventures with the participation of western firms operate in the CR, which is an important factor of restructuring on the microlevel and an increase of dynamics on the supply side.

Last but not least, there are various "technical" costs to separation. Their balance is much more favorable, again, for the CR. Just take one example: the CR, the seat of federal authority as well as organizations dealing in international affairs that have accumulated over the past period a lot of specific know-how, gained international contacts, and mastered specific functional routines, would not have to build them completely anew. That would be the case, however, with Slovakia.

All the above-mentioned data and arguments indicate that eonomic separation of Czechoslovakia would not be a very good solution for Slovakia. Rather than establish conditions for an effective "Slovak" approach toward economic reform, it would deepen existing problems and create further obstacles for economic transformation.

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# Statistical Appendix

Table 1

The Industrial Structure of the Czech and Slovak Economy in 1989

|   |              | [in %]       |
|---|--------------|--------------|
| Industry                                  | CR           | SR           |
| Total                                     |              | 100.0        |
| A. Production of Means of Production      | 70.2<br>29.7 | 70.1<br>29.9 |
| B. Production of Consumer Goods of which: | 29.7         | 29.9         |
| Fuels                                     | 6.1          | 1.1          |
| Energy                                    | 4.0          | 3.7          |
| Metallurgy: iron                          | 8.8          | 7.5          |
| non iron                                  | 2.2          | 2.0          |
| Chemical and Rubber Industry              | 9.7          | 16.1         |
| Machinery                                 | 22.0         | 17.0         |
| Electrical and Electronics Industry       | 3.9          | 5.6          |
| Metalworking (inc.plastics)               | 3.2          | 6.1          |
| Construction Materials                    | 3.0          | 4.0          |
| Wood and Furniture                        | 2.9          | 3.8          |
| Paper Industry                            | 1.8          | 2.7          |
| Glass, China and Ceramics                 | 1.6          | 0.8          |
| Textile Industry                          | 4.8          | 3.4          |
| Apparel                                   | 1.2          | 2.0          |
| Leather                                   | 2.2          | 2.9          |
| Printing Industry                         | 0.4          | 0.5          |
| Food and Beveriges                        | 16.6         | 17.5         |
| Tobacco, Cooling Plants, Mineral Springs  |              |              |
| Exploitation                              | 0.4          | 0.7          |
| Other                                     | 3.9          | 2.6          |
|   |              |              |

Source: Calculated from 9, p. 362

Table 2

The Supplies for Production Use and Final Use from Selected Industries in the CR and the SR in 1987 [in %]

CR SR

| Industry                     | Product. |        |         |         |
|------------------------------|----------|--------|---------|---------|
|                              | Use      | Use    | Use<br> | Use<br> |
| Agriculture                  | 84.9     | 13.2a) | 79.0    | 18.6    |
| Forestry                     | 89.6     | •      | 86.5    |         |
| Water Supplies               | 83.9     | 15.1   | 65.2    |         |
| Fuels                        | 57.7     |        | 134.0   | -33.9   |
| Energy Industry              | 61.1     |        | 71.6    |         |
| Metallurgy: iron             |          | 21.3   | 79.2    |         |
| non iron                     | 83.0     | 0.3    | 76.9    | 24.6    |
| Chemical, Rubber and         |          |        |         |         |
| Asbestos Industry            | 80.8     | 17.6   | 53.4    | 46.6    |
| Machinery                    | 36.6     | 63.8   | 45.2    | 56.4    |
| Electrical and               |          |        |         |         |
| Electronic Industry          | 56.9     | 42.3   | 57.7    | 41.7    |
| Construction Materials       | 90.4     | 11.9   | 73.8    | 26.2    |
| Wood and Furniture           | 55.9     | 43.3   | 50.0    | 48.8    |
| Metallworking Industry       | 68.3     | 30.9   | 52.6    | 47.4    |
| Paper Industry               | 77.0     | 24.5   | 67.9    | 31.2    |
| Glass, China and Ceramics    | 41.7     | 57.1   | 65.8    | 32.0    |
| Textile Industry             | 43.6     | 55.5   | 69.7    | 28.6    |
| Apparel                      | 8.6      | 88.5   | 8.0     | 89.4    |
| Leather                      | 41.2     | 57.3   | 34.0    | 63.0    |
| Printing Industry            | 50.0     | 53.7   | 55.5    | 50.0    |
| Food and Beveridges          | 23.2     | 74.6   | 23.1    | 74.3    |
| Tobacco, Cooling Plants,     |          |        |         |         |
| Mineral Springs Exploitation | 17.4     | 67.4   | 25.7    | 65.1    |
| Other Industry               | 70.4     | 35.4   | 67.8    | 42.6    |
| Construction                 | 14.5     | 83.7   | 11.4    | 87.0    |
| Geological Exploration       | 54.4     | 45.6   | 77.4    | 22.6    |
| Technical Design Activity    | 7.9      | 95.4   | 8.4     | 96.4    |
| Transport                    | 51.2     | 47.7   | 57.5    | 41.5    |
| Telecommunications           | 48.7     | 52.5   | 48.5    | 52.6    |
| Internal Trade, External     |          |        |         |         |
| Trade, Public Catering       | 0.9      | 99.1   | 1.6     | 98.4    |
| Material Technical Supplies  | 68.9     | 31.1   | 100.0   | - 0.8   |
| Buy up of Agricultural       |          |        |         |         |
| Products                     | 57.3     | 42.7   | 50.8    | 49.2    |
|                              |          |        |         |         |

a) Losses and Statistical Discrepancies add up to 100 Source: 5, pp. 91, 170

Table 3 Territorial Structure of Sales of Czech and Slovak Producers in 1989 [in %]

|                     | Location of<br>Enterprise | CR   | SR           | Socialist<br>Countr. |            |
|---------------------|---------------------------|------|--------------|----------------------|------------|
| Coal Mining         | CR<br>SR                  | 81.2 | 10.4<br>99.6 | 3.9<br>0.3           | 4.5        |
| Gas Industry        | CR                        | 70.9 | 29.1         | 0.0                  | 0.0        |
|                     | SR                        | 9.1  | 90.6         | 0.1                  | 0.1        |
| Heat and Electricit | y CR                      | 96.2 | 2.1          | 1.0                  | 0.7        |
|                     | SR                        | 2.8  | 93.6         | 2.0                  | 1.6        |
| Ores Mining         | CR<br>SR                  |      | 12.6<br>29.5 | 15.2<br>26.7         | 4.8<br>6.9 |
| Metallurg - Iron    | CR                        | 69.9 | 15.6         | 8.5                  | 6.1        |
|                     | SR                        | 47.9 | 24.2         | 15.4                 | 12.5       |
| Metallurg - Non Iro | n CR                      | 79.1 | 18.3         | 1.4                  | 1.2        |
|                     | SR                        | 65.7 | 25.2         | 4.1                  | 4.9        |
| Chemical and Oil    | CR                        | 67.6 | 20.3         | 3.7                  | 8.4        |
| Industry            | SR                        | 33.3 |              | 6.1                  | 9.9        |
| Rubber, Plastics,   | CR                        |      | 14.8         | 5.3                  | 6.4        |
| Asbestos            | SR                        |      | 32.3         | 6.4                  | 7.7        |
| Production for      | CR                        | 81.1 | 8.7          | 5.3                  | 5.0        |
| Medical Purposes    | SR                        | 53.9 | 30.4         | 5.0                  | 10.8       |
| Heavy Machinery     | CR                        | 55.8 | 15.1         | 23.3                 | 5.9        |
|                     | SR                        | 57.0 | 20.3         | 21.8                 | 0.8        |
| General Machinery   | CR                        | 62.3 | 16.2         | 14.7                 | 6.8        |
|                     | SR                        | 42.5 | 38.4         | 15.4                 | 3.8        |
| Electrical          | CR                        | 67.1 | 16.6         | 12.3                 | 4.1 2.4    |
| Industry            | SR                        | 45.7 | 40.4         | 11.5                 |            |
| Construction        | CR                        | 88.7 | 6.5          | 2.6                  | 2.2        |
| Materials           | SR                        | 13.2 | 83.8         | 2.4                  |            |
|                     |                           | 28   |              |                      |            |

| (Table 3 continued) |    |      |      |      |      |
|---------------------|----|------|------|------|------|
| Wood and            | CR | 70.7 | 6.3  | 6.2  | 16.8 |
| Furniture           | SR | 13.6 | 66.2 | 10.7 | 9.5  |
| Paper Industry      | CR | 76.0 | 11.0 | 1.6  | 11.4 |
|                     | SR | 32.3 | 48.5 | 3.5  | 15.6 |
| Glass, China,       | CR | 48.4 | 11.1 | 14.0 | 26.5 |
| Ceramics            | SR | 28.5 | 37.4 | 11.7 | 22.4 |
| Textile Industry    | CR | 60.0 | 16.2 | 8.8  | 16.0 |
|                     | SR | 28.9 | 49.7 | 11.2 | 10.2 |
| Apparel             | CR | 43.7 | 18.5 | 28.8 | 9.1  |
|                     | SR | 31.9 | 23.7 | 28.6 | 15.7 |
| Leather, Shoes,     | CR | 67.1 | 10.6 | 14.0 | 8.4  |
| Furs                | SR | 23.3 | 54.2 | 15.1 | 7.4  |
| Printing Industry   | CR | 85.4 | 5.8  | 1.6  | 7.1  |
|                     | SR | 4.7  | 85.1 | 1.2  | 9.0  |
| Food and Beveriges  | CR | 90.7 | 3.7  | 1.1  | 4.5  |
|                     | SR | 9.1  | 84.0 | 1.7  | 5.2  |

Source: Calculated from 6, pp. 19-26, 29-34

Table 4

The Difference Coefficient with Regard to Exports from the CR and SR to the Capitalist and Former Socialist Countries in 1989

[in %]

|                            | CR    |       |       | SR    |
|----------------------------|-------|-------|-------|-------|
| Industry                   | sc    | CC    | sc    | СС    |
| Coal Mining                | 76.0  | 98.9  | 150.1 | 111.4 |
| Gas Industry               | 57.8  | 126.7 | 59.0  | 67.9  |
| Production of Heat         |       |       |       |       |
| and Electricity            | 80.3  | 85.9  | 79.6  | 82.1  |
| Ores Mining                | 112.8 | 98.8  | 105.3 | 116.0 |
| Metallurgy: Iron           | 71.2  | 116.9 | 90.5  | 132.0 |
| Non Iron                   | 145.9 | 161.9 | 106.2 | 145.0 |
| Chemical and Oil Industry  | 102.3 | 113.2 | 79.7  | 94.7  |
| Rubber, Plastics, Asbestos | 115.6 | 107.5 | 103.6 | 106.5 |
| Production for Medical Use | 184.0 | 94.3  | 230.3 | 77.2  |
| Heavy Machinery            | 125.1 | 119.0 | 125.2 | 395.9 |
| General Machinery          | 137.6 | 106.8 | 121.8 | 106.5 |
| Electrical Industry        | 154.3 | 86.0  | 143.0 | 92.4  |
| Construction Materials     | 110.8 | 147.3 | 112.0 | 106.0 |
| Wood and Furniture         | 78.9  | 104.8 | 69.8  | 84.5  |
| Paper Industry             | 90.0  | 117.9 | 71.1  | 119.7 |
| Glass, China, Ceramics     | 113.0 | 130.0 | 97.8  | 103.1 |
| Textile Industry           | 90.9  | 87.6  | 81.0  | 82.5  |
| Apparel                    | 69.6  | 87.8  | 66.5  | 88.5  |
| Leather, Shoes, Furs       | 94.9  | 86.4  | 99.7  | 83.8  |
| Printing Industry          | 123.6 | 74.7  | 126.7 | 82.6  |
| Food and Beveriges         | 57.4  | 58.5  | 59.4  | 49.7  |

Source: Calculated from 6, pp. 19-23, 29-34

#### The Minda de Gunzburg Center for European Studies

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