Part 1. Characteristics of shortage: the conceptual framework\textsuperscript{1}

1. Introduction\textsuperscript{2}

One of the most typical features of the classical socialist system is a shortage economy. "An economic system is a shortage economy if the following conditions coincide: shortage phenomena are one, general, that is, found in all spheres of the economy (in trade in goods and services for consumers, in means of production, including investment goods, in labour, in exported and imported products, and in international means of payment); two, frequent, and not only exceptional or sporadic; three, intensive, making their influence felt very strongly on the behaviour and environment of participants in the economy and the traits and results of the economic processes; and four, chronic, applying constantly, not just occurring temporarily."\textsuperscript{3} The transfer to a capitalist market economy is accompanied by the elimination of this shortage economy.

This study considers the problem on two planes. One is the plane of general analysis, where the specific historical situation, differing from country to country, is disregarded. The other plane contains an examination of developments in Hungary, as an illustration of what is said. Although there are occasional references to the situation in other countries, I do not attempt to provide any comprehensive comparative analysis between countries. The study alternates between the general and the Hungarian plane.

This research is an integral continuation of my earlier work on the subject of shortage, which began with \textit{Overcentralization in Economic Administration} (1957; 1959, Ch.4), and having been summed up initially in \textit{Economics of Shortage} (1980), was drawn together comprehensively in \textit{The Socialist System} (1992). My assumption in writing this study has been that its readers will be conversant with the early literature on the shortage economy and familiar with the concepts employed in it.\textsuperscript{4}
A wide-ranging debate on the shortage phenomena that appear under the socialist system has broken out in the last one-and-a-half decades, with argument about the conceptual apparatus, measurement of the shortage, and above all the causes of the shortage. This study does not undertake to provide an intellectual history of this field, or clarify the extent to which various views have been confirmed or denied by subsequent historical development. My own ideas have undergone many changes since I began to deal with this subject. I have tried to utilize what I have learnt from others to revise and develop further my own ideas, and at the same time to produce a synthesis. It was in accordance with this aim of synthesizing that I formulated in relation to the socialist economy the chapters dealing with shortage in my book *The Socialist System*, and this study, concerned with the present and future of the post-socialist economy, has been conceived in the same spirit.

Numerous authors are studying the elimination of the shortage economy. For most of them this is not the main subject of their examination, but this question is touched upon along with others. Let me mention specially the studies of Rosati (1993), Berg and Sachs (1992), Laski *et al.* (1993), and Zukowski (1993), which have had a thought-provoking effect on my own work.

Chapter 2 of the study describes the phenomena involved in the elimination of the shortage economy. The subject of Chapter 3 is causal analysis. Chapter 4 concerns the relations between the elimination of the shortage and the state of the labour market. Finally, Chapter 5 makes an assessment of the changes.

### 2. The phenomena involved in the changes

This chapter has a dual purpose. My first aim is to illustrate the ways in which the process of eliminating the shortage economy can be observed and measured. This is all the more important because the study will go on to suggest that the process is closely connected with the change of system. So establishing where some country stands in the elimination of the shortage economy also gains us some important information about its progress with the change of system.

The other purpose of the chapter is to present the specific changes in Hungary, at the level of what can be perceived by the buyers of products and services.

#### 2.1 Producers' goods

One of the characteristics of the chronic shortage economy is that disturbances, delays and often grave damage are frequently caused in production by shortages of various inputs (materials, semi-finished products, components, equipment or labour). Producers often perform a forced substitution; production may be suspended for longer or shorter periods because some indispensable input happens to be in short supply. Shortage phenomena form the commonest constraint on production growth in the processes of instantaneous and short-term adjustment, not any difficulties with sales.

In a mature market economy, this situation is reversed. There may be sporadic problems there, too, with obtaining inputs, but far more frequent and abiding constraints are placed on production by a shortage of orders and sales difficulties. With this phenomenon in mind, I have called the former a resource-constrained (sometimes also called supply-constrained) system and the latter a demand-constrained system. A pure case of one or the other never arises in real economies; both the supply side and the demand side can arise as a constraint at the micro level. When comparing the systems, it is enough to clarify which side plays a dominant role in constraining production.
Table 1. Impediments to production: Hungarian survey data (in per cent)

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Insufficient demand</th>
<th>Shortage of labour</th>
<th>Insufficient supply of Raw materials and Spare parts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Domestic Origin from Rouble area</td>
</tr>
<tr>
<td>1987/1</td>
<td>26.0</td>
<td>22.2</td>
<td>41.2</td>
</tr>
<tr>
<td>2</td>
<td>27.4</td>
<td>23.7</td>
<td>42.3</td>
</tr>
<tr>
<td>3</td>
<td>21.3</td>
<td>24.1</td>
<td>46.6</td>
</tr>
<tr>
<td>4</td>
<td>24.1</td>
<td>15.8</td>
<td>39.4</td>
</tr>
<tr>
<td>1988/1</td>
<td>28.0</td>
<td>15.7</td>
<td>50.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>28.3</td>
<td>24.7</td>
<td>44.1</td>
</tr>
<tr>
<td>3</td>
<td>27.3</td>
<td>23.0</td>
<td>45.3</td>
</tr>
<tr>
<td>4</td>
<td>30.7</td>
<td>19.3</td>
<td>38.5</td>
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<tr>
<td>1989/1</td>
<td>38.0</td>
<td>21.5</td>
<td>37.6</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2</td>
<td>40.1</td>
<td>22.0</td>
<td>28.7</td>
</tr>
<tr>
<td>3</td>
<td>40.4</td>
<td>21.9</td>
<td>27.5</td>
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<tr>
<td>4</td>
<td>51.2</td>
<td>13.4</td>
<td>21.4</td>
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<tr>
<td>1990/1</td>
<td>51.3</td>
<td>12.1</td>
<td>13.8</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2</td>
<td>56.1</td>
<td>13.9</td>
<td>13.0</td>
</tr>
<tr>
<td>3</td>
<td>51.0</td>
<td>10.3</td>
<td>15.3</td>
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<tr>
<td>4</td>
<td>54.5</td>
<td>4.3</td>
<td>11.3</td>
</tr>
<tr>
<td>1991/1</td>
<td>60.6</td>
<td>4.3</td>
<td>9.4</td>
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<tr>
<td>2</td>
<td>70.1</td>
<td>4.0</td>
<td>7.1</td>
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<td>3</td>
<td>66.8</td>
<td>3.3</td>
<td>6.2</td>
</tr>
<tr>
<td>4</td>
<td>65.9</td>
<td>3.0</td>
<td>7.2</td>
</tr>
<tr>
<td>1992/1</td>
<td>65.1</td>
<td>3.3</td>
<td>5.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2</td>
<td>62.2</td>
<td>7.4</td>
<td>5.9</td>
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<tr>
<td>3</td>
<td>56.1</td>
<td>4.4</td>
<td>10.6</td>
</tr>
<tr>
<td>4</td>
<td>54.5</td>
<td>4.8</td>
<td>8.7</td>
</tr>
<tr>
<td>1993/1</td>
<td>57.7</td>
<td>2.2</td>
<td>6.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>68.8</td>
<td>3.0</td>
<td>6.0</td>
</tr>
<tr>
<td>3</td>
<td>67.9</td>
<td>3.7</td>
<td>7.5</td>
</tr>
<tr>
<td>4</td>
<td>62.5</td>
<td>4.3</td>
<td>9.4</td>
</tr>
</tbody>
</table>

The survey applies the methodology elaborated by the German research institute, IFO, and used in several other countries as well. Respondents are asked to mention "impediments of production". Each respondent can mention as many impediments as he likes. The figures refer to relative frequencies in percentage. (E.g., in 1987/1 out of 100 respondents 26 mentioned insufficient demand, besides mentioning other factors as well.) There are other impediments mentioned by the respondents but not included in this table. "Rouble area" refers to the former member countries of COMECON. The survey did not separate the "Rouble area" and the "Dollar area" in 1987 and in 1993; the data refer to the lack of imported raw materials and spare parts.
Under reform socialism, and then during the post-socialist transition, the economy moves away and then switches from a resource-constrained (supply-constrained) regime to a demand-constrained regime. Basically, this process has already taken place in Hungary, as Table 1 shows. The role of the input constraints has been reduced to insignificance, while that of the demand constraints has grown strongly. So production is no longer occurring under the conditions of the shortage economy that was customary for decades.

According to Table 1, the change was not a sudden one, but happened gradually, step by step.

To illustrate how many experts on the socialist and post-socialist economy evaluate the change in a similar conceptual framework, let me give a few quotations. In Czechoslovakia, where the switch took place very quickly, Vintrovi writes (1993, p.84), "With unexpected speed, the predominantly 'supply-limited' (deficit) Czechoslovak economy has turned into one that is entirely 'demand-limited', even though a number of structural deficits still survive owing to rigidity and new ones are appearing. But almost overnight the main problem has become the lack of sales." Rosati (1993, p.251) establishes about the changing macroeconomic conditions in Poland that they "... are all symptoms of transforming the Kornai-type, supply-constrained economy into a Keynesian-type, demand-constrained one." Zukowski (1993, p.1175), in another article on Poland, states after describing the shifts in supply and demand, "In this way, a resource-restrained system turns into a demand-restrained one."

Table 2. Ratio of input and output stocks in manufacturing countries

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>1.06</td>
<td>1.13</td>
<td>1.15</td>
<td>1.27</td>
<td>1.32</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Canada</td>
<td>0.92</td>
<td>1.04</td>
<td>-</td>
<td>1.12</td>
<td>1.05</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Finland</td>
<td>1.92</td>
<td>1.60</td>
<td>1.72</td>
<td>1.76</td>
<td>1.75</td>
<td>1.45</td>
<td>-</td>
</tr>
<tr>
<td>Japan</td>
<td>1.09</td>
<td>0.71</td>
<td>0.71</td>
<td>0.72</td>
<td>0.74</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Portugal</td>
<td>1.66</td>
<td>1.31</td>
<td>1.53</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>United States</td>
<td>1.02</td>
<td>1.02</td>
<td>1.04</td>
<td>1.05</td>
<td>1.03</td>
<td>0.99</td>
<td>-</td>
</tr>
<tr>
<td>Hungary</td>
<td>6.10</td>
<td>-</td>
<td>-</td>
<td>5.16</td>
<td>4.65</td>
<td>3.50</td>
<td>2.67</td>
</tr>
</tbody>
</table>

Source: The table was compiled by A. Chikán on the basis of the following sources: United Nations (1992) and Chikán (1994).

Under a resource-constrained (supply-constrained) system, the producer is uncertain about the acquisition of inputs, and so a hoarding tendency develops. Stocks accumulate primarily on the procurement side of the firm, whereas sales are easy due to the chronic shortage, so that stocks on the sales side are relatively small. The situation under a demand-constrained system is reversed, since procurement is easy, but selling is difficult. According to this train of thought, the ratio between the stocks of inputs and outputs will be a good reflection of which side is dominant as the constraint on production. Table 2
gives international figures for comparison and shows the change in Hungary. An essential shift has occurred in the ratio between the two kinds of stocks, although this has yet to reach the ratio typical of a mature market economy. Still, this meaningful index again shows that Hungary has moved most of the way towards eliminating the shortage economy apparent in production.

Here again, the change is a gradual one; worth noting is the way the shift in proportions has accelerated in recent years.

2.2 Consumer goods
If this study were about the Soviet Union's successor states, or Poland or Romania, it would be necessary to recall and describe numerically the period a few years ago, when there was still a serious shortage appearing in basic foodstuffs, fuel or other indispensable consumer goods. The state of acute shortage then would have to be compared with the present position. In Hungary these most excruciating shortages ceased much earlier, in the 1970s. Steady progress was made with eliminating the shortage economy in consumer goods and services, as in producers' goods. The various phenomena of shortage applied steadily more rarely or less intensively in the case of more and more products, groups of products or whole sectors. With goods for which there had been long queues, these became shorter, and then ceased altogether. Forced substitution occurred more rarely; it became more common for the buyer to find the originally sought good or service without any difficulty.

Table 3. Queuing in post-socialist countries

<table>
<thead>
<tr>
<th>Countries</th>
<th>1991</th>
<th>1992</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulgaria</td>
<td>42</td>
<td>23</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>39</td>
<td>33</td>
</tr>
<tr>
<td>Hungary</td>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td>Poland</td>
<td>22</td>
<td>9</td>
</tr>
<tr>
<td>Romania</td>
<td>45</td>
<td>29</td>
</tr>
<tr>
<td>Slovakia</td>
<td>34</td>
<td>36</td>
</tr>
</tbody>
</table>

During regular international opinion polling undertaken as part of the New Democracies Barometer research project, the following question was put: "Do you or anyone in your household spend more than an hour a day queuing for things in shops?" The figures in the table give the relative frequency for the affirmative answers.

Table 3 presents an international comparison based on interview data. It shows Poland and Hungary to be the only post-socialist countries examined of which it can be said that most consumers' lives are no longer embittered by frequent and lengthy queuing.
Let me mention as examples three groups of products where the shortage economy survived in rear-guard positions in Hungary. One is the car market. Table 4 gives the main figures about queuing for cars. The table ends with 1992, since when there has been no queuing due to shortage. On the contrary, car dealers have been holding considerable unsold stocks.

Table 4. Queuing for new cars in Hungary

<table>
<thead>
<tr>
<th>Year</th>
<th>Cars sold without queuing (%)</th>
<th>Cars sold after queuing (%)</th>
<th>Waiting period (year) (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1982</td>
<td>21.5</td>
<td>78.5</td>
<td>2.6</td>
</tr>
<tr>
<td>1983</td>
<td>25.3</td>
<td>74.7</td>
<td>2.4</td>
</tr>
<tr>
<td>1984</td>
<td>23.6</td>
<td>76.4</td>
<td>2.1</td>
</tr>
<tr>
<td>1985</td>
<td>24.4</td>
<td>75.6</td>
<td>1.9</td>
</tr>
<tr>
<td>1986</td>
<td>22.5</td>
<td>77.5</td>
<td>2.0</td>
</tr>
<tr>
<td>1987</td>
<td>24.5</td>
<td>75.5</td>
<td>1.9</td>
</tr>
<tr>
<td>1988</td>
<td>23.2</td>
<td>76.8</td>
<td>2.3</td>
</tr>
<tr>
<td>1989</td>
<td>42.7</td>
<td>57.3</td>
<td>2.9</td>
</tr>
<tr>
<td>1990</td>
<td>52.3</td>
<td>47.7</td>
<td>2.3</td>
</tr>
<tr>
<td>1991</td>
<td>93.8</td>
<td>6.2</td>
<td>1.2</td>
</tr>
<tr>
<td>1992</td>
<td>100.0</td>
<td>0.0</td>
<td>-</td>
</tr>
<tr>
<td>1993</td>
<td>100.0</td>
<td>0.0</td>
<td>-</td>
</tr>
</tbody>
</table>


The second group consists of the set of products to do with electronics, information technology and telecommunications. In the 1980s, the range of such products imported by the state foreign trade companies or manufactured by the state-owned firms was extremely limited. The shortage was severe, and eased only by semi-legal or quite illegal imports. Such imports were swelled at a later stage by what was known as shopping tourism, this being one of the groups of products on which it was concentrated. Today the choice in Hungary is ample, and the sellers are running up against sales difficulties.

The third example is the housing sector, which is worth mentioning not only because of its exceptional influence on the standard of living, but because there are several important concepts and relations which can be clarified by taking it as an example.

There are four logically distinguishable phenomena that are frequently confused. The first is a housing shortage. It is right to call it a shortage if the potential tenant of a
rented flat or the potential buyer of an owner-occupied dwelling is prepared to pay the
going price, but the transaction fails to take place at this going price because of a
shortage of supply. There is an excess demand for housing. The phenomenon opposite
of this: the landlord of the rented accommodation offers the rights of tenancy to a
potential tenant, or the owner of a dwelling offers the rights of ownership to a potential
buyer, but the latter does not have enough money to pay the desired rent or purchase
price. The problem the tenant is struggling with is not shortage, but affordability. With
his or her present and likely future income, he or she cannot afford to spend that much
on housing. In this case an excess supply of housing prevails.

Returning to the question of housing shortage, its nature need to be described in more
detail in order to characterize the state of the housing sector. Reference is made
colloquially to a housing shortage without qualification (or possibly to a "general"
housing shortage) when the shortage phenomena in the housing sector are frequent,
intensive and chronic. But there can be a partial shortage in a particular geographical area
or in a particular type of housing even when a general, intensive and chronic shortage of
housing is not characteristic of the housing sector.

That leads on to a discussion of the next phenomenon: the problems of the breadth
of choice of housing. Even in economies where there is an excess supply of both rented
and owner-occupied housing, the choice may be poor. Dwellings are among the most
varied of goods, whose quality is composed of a very large number of characteristics.
The choice will grow as a function of the development of the economy (and within it the
housing sector) and of the refinement and adaptiveness of the coordination mechanism.
Even though there is a situation of excess supply in a group of goods as a whole, the
satisfaction of buyer's demands depends on how "dense" or how "thin", and how efficient
is the market on which the transactions take place.

Finally, a distinction must be drawn between what has been discussed so far and the
actual housing situation, the "consumption" of housing. Regardless of whether the
shorter side, the effective constraint, is the supply of housing or the purse of the tenant
or buyer, the actual tenancy or sale transactions take place in the end. The housing sector
contains a finite stock of housing at a certain time which will be allocated one way or
another. A high proportion of the dwellings in poorer, more backward countries is
cramped and poor in quality. Many people live in housing squalor. This depressing
phenomenon may apply equally if there is an excess demand on the market, in other
words, a housing shortage, or if there is an excess supply on the market, and households
do not have enough money to create for themselves the housing conditions they desire.

A severe, chronic housing shortage developed everywhere under the classical socialist
system. This was the case in Hungary as well, but later, in the decades after the 1968
reform, the housing shortage steadily eased. Even today, two kinds of phenomenon
exist side by side. There is still an excess demand for state-owned housing that can be
rented for bureaucratically prescribed and set rents, much lower than the rents prevailing
on the market. But the segment represents a smaller and smaller proportion of the
national housing stock - about one fifth at present (though more in the cities, particularly
Budapest). Even in this segment the shortage is eased by a "grey market": an existing
tenant can pass the tenancy on to a new tenant in exchange for a sum of money agreed
between them. Meanwhile, the majority of housing is already in private hands. One of
the major changes in recent years has been to abolish certain oppressive, bureaucratic
restrictions on the housing market. For instance, the administrative constraint marked by
the principle of "one family, one dwelling" has been lifted, and the rents of privately
owned dwellings and sub-letting rents have been freed.
Eliminating the shortage economy

Hungary now has an available supply, free of bureaucratic constraints, of all kinds of dwelling, but the choice is meagre, i.e. the housing market is fairly "thin". In this sense the housing sector as a whole no longer has a shortage-economy character. Anyone with the money can rent or buy a dwelling. According to the definitions given earlier, this statement is compatible with the assertion that the housing conditions of wide sections of the population are unsatisfactory, and some groups are living in squalor.

2.3 Summary
The Hungarian economy can no longer be called a shortage economy. Although there are sporadic occurrences of shortage in almost every sphere, the same can be said of mature market economies as well. There are certain well-defined sectors operating on a non-market, non-commercial basis (such as health care), in which intensive and chronic phenomena of shortage appear, but the situation is similar in these very sectors in many mature market economies as well. Looking at the economy as a whole, however, it can be said that in this respect Hungary has arrived at the state typical of market economies.

The specific feature of development in Hungary has been that this narrowing down of the shortage phenomena and subsequent elimination of the shortage economy, has taken place gradually, over a very protracted period. The process then speeded up in the late 1980s, particularly after the change of political system.

3. Causal analysis

Many people attribute the elimination of the shortage economy to a single factor, for instance the freeing of prices or the restrictive monetary policy pursued. Attempts are commonly made to derive the phenomena of the shortage economy from the well-known relations between demand, supply and prices. In this study a more complex explanation is advanced. Great significance is attached to the effects of political and institutional changes, as well as economic factors in the narrow sense. Instead of attempting to explain the end of the shortage economy exclusively in terms of macroeconomic or of microeconomic factors, both approaches are employed.

3.1 Privatization, decentralization and deregulation
A broad class of institutional changes will be reviewed here.

3.1.1. Broader freedom of entry; the appearance of new private firms.
There is no free enterprise under classical socialism. Large production units established by the party-state - state firms and quasi-state agricultural cooperatives - operate almost exclusively. The creation of every new firm is the result of a sluggish and protracted process of bureaucratic decision-making. The circumstance in which there is a shortage of some product or service will not induce the birth of a new firm.

The capitalist market economy, on the other hand, is basically marked by freedom of entry. Shortage gives a strong incentive for a new business to enter and meet it, since it offers special opportunities for profits. Even if the firms already operating ignore the shortage signals, the new firms in themselves will become capable sooner or later of plugging the gap.

The scope for entry has been steadily widening in the Hungarian economy, with more and more firms being founded. The number of business organizations rose from 40,468 in 1988 to 186,572 in January 1994, the vast majority of which are new private firms.
A high proportion of the new entries can be seen to have occurred in fields where there used to be a shortage.

3.1.2. Import liberalization

Under classical socialism, imports are surrounded by strict administrative constraints. When a shortage in a certain product appears, the decision-makers in the bureaucracy are not automatically persuaded to import it. There will be imports to make up for the shortage if they see fit, but they may equally well refrain from them, obliging the buyer to make a forced substitution, or if this does not happen, they simply acknowledge the persistence of the shortage.

A developed market economy does not normally have any import restrictions of this kind, which might cause a shortage to appear in domestic supplies. Excess demand induces imports, since there are prospects of above-average profits. Liberalized imports are capable largely by themselves of eliminating many shortages in tradable goods and services, even where domestic producers are unable or unwilling to satisfy the excess demand.

Hungary has undergone a gradual liberalization of imports in several stages over the last ten or fifteen years, so that they are now almost completely free of administrative controls. (See Table 5.)

Table 5. The proportion of liberalized import products in Hungary

<table>
<thead>
<tr>
<th>Branch/sectors</th>
<th>Proportion of liberalized import products in per cent of turnover</th>
<th>Proportion of liberalized import products as a per cent of 1988 turnover</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mining</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Power generation</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Metallurgy</td>
<td>0</td>
<td>67</td>
</tr>
<tr>
<td>Engineering</td>
<td>86</td>
<td>89</td>
</tr>
<tr>
<td>Building materials</td>
<td>31</td>
<td>28</td>
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<tr>
<td>Chemicals</td>
<td>2</td>
<td>73</td>
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<tr>
<td>Light industry</td>
<td>6</td>
<td>45</td>
</tr>
<tr>
<td>Other industry</td>
<td>0</td>
<td>43</td>
</tr>
<tr>
<td>Food industry</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>Industry</td>
<td>43</td>
<td>71</td>
</tr>
<tr>
<td>Agriculture</td>
<td>24</td>
<td>36</td>
</tr>
<tr>
<td>Forestry</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Total imports</td>
<td>42</td>
<td>69</td>
</tr>
</tbody>
</table>

Eliminating the shortage economy

The role of imports in compensating for shortages is made easier by the change mentioned under 3.1.1, broader freedom of entry. Large numbers of new, private foreign-trading firms appear. There used to be a few dozen large state-owned foreign trade firms, each largely monopolizing the imports of a certain group of products, but they are now replaced or joined as competitors by a myriad of new foreign-trading undertakings large and small, which try to move quickly into every domestic market left unsatisfied by domestic production.

3.1.3. Elimination of the system of directives
Under classical socialism, state-owned and quasi-state firms are prescribed detailed, obligatory output targets and input quotas. The intricacy and rigidity of this system of commands and the insensitivity of the planners drawing up the directives to the needs of users and consumers contribute to the widespread friction in the accommodation processes, to the weakness of the economy's ability to adapt, and so to the occurrence of shortages.

The system of directives came to an end in Hungary after the 1968 reform, and the autonomy of state-owned firms increased. Although their autonomy was still curbed by various kinds of bureaucratic interference, their activity became more flexible than before. This too played a part in the fact that instances of shortage were less frequent and intensive in the reform socialist economy than they had been before the reform.

3.1.4. Hardening of the budget constraint on firms
The budget constraint on state-owned and quasi-state firms under classical socialism is soft. The state ensures their survival even if they make persistent losses. As a result, they have a weak responsiveness to prices and costs: they do not react strongly to the signals of relative prices, and make no great efforts to reduce their costs. This dull responsiveness to prices and costs appears on both the supply and the demand sides, blunting the firm's ability to adapt.

The budget constraint on firms in a mature capitalist market economy is hard. Firms maximize their profits. Persistent losses or serious insolvency lead to bankruptcy and ultimately to liquidation. Business behaviour cannot be based on the assumption that the state will bail a firm out, because this only happens exceptionally. So firms are strongly responsive to prices and costs. They strive to react to changes in relative prices on both the supply and the demand sides, and make great efforts to reduce costs. This, under the conditions of a mature market economy, applies both to private firms and state-owned firms, so long as the state sector remains fairly small and the state has not become accustomed to protecting its firms in a paternalist way.

Looking at the economy as a whole, Hungary has undergone a gradual hardening of the budget constraint. There were several factors involved in this process:

- The relative size of the private sector has been growing steadily and continues to grow, partly through the privatization of state-owned firms, and partly through the appearance of new private firms. Private firms usually have a hard budget constraint from birth; the vast majority cannot expect financial help from the state.

- Firms previously and still in state ownership progressively realize that their survival is not guaranteed. From time to time this learning process has speeded up. The political changeover in 1990 acted in itself as a warning that the privileged status of the state sector was coming to an end. The new, post-socialist political authorities made it plain that the future belonged to the private sector; the very prospect of privatization made questionable the automatic guarantee of survival extended in the past. On top of this came the experience of initially occasional, and then proliferating bankruptcies and
liquidations. It was finally made plain by the new bankruptcy act and the subsequent surge of bankruptcies that the age of the soft budget constraint was over. Although the process is by no means over, as symptoms of a soft budget constraint repeatedly recur, confidence in automatically guaranteed survival has been dispelled. The price and cost-sensitivity of the firms in temporary and permanent state ownership has accordingly grown.

3.1.5. The freeing of prices; the dismantling of price subsidies
With few exceptions, the prices under classical socialism are set centrally and remain fixed for a long time. The main role in the allocation of producers' goods is played by planning commands; the effect of prices is weak, due to the circumstance mentioned just now, the softness of the budget constraint. However, prices have, of course, the customary effect on demand from households, where the budget constraint is hard. Since a high proportion of consumer goods and services had unrealistically low prices, made possible by price subsidies provided by the budget, excess demand for them developed.

Table 6. Change in proportions of market prices in the production sphere

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
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<tbody>
<tr>
<td>Year</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mining</td>
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<td>30</td>
<td>20</td>
<td>25</td>
<td>25</td>
<td>50</td>
<td>75</td>
<td>75</td>
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<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
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<tr>
<td>Metallurgy</td>
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<td>96</td>
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<td>96</td>
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<td>100</td>
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<td>100</td>
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<td>100</td>
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<td>100</td>
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<tr>
<td>Building materials</td>
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<td>Chemicals</td>
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<td>60</td>
<td>90</td>
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<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Food industry</td>
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<td>87</td>
<td>93</td>
<td>92</td>
<td>97</td>
<td>97</td>
<td>100</td>
<td>100</td>
<td>100</td>
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<tr>
<td>Total industry</td>
<td>58</td>
<td>71</td>
<td>81</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Construction</td>
<td>45</td>
<td>13</td>
<td>13</td>
<td>35</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
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<tr>
<td>Agriculture (procurement)</td>
<td>16</td>
<td>37</td>
<td>37</td>
<td>40</td>
<td>50</td>
<td>82</td>
<td>85</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Transport, telecom</td>
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<td>25</td>
<td>35</td>
<td>60</td>
<td>60</td>
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<td>Water management</td>
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<td>10</td>
<td>15</td>
<td>25</td>
<td>25</td>
<td>25</td>
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<tr>
<td>Trade (mark-up)</td>
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<td>100</td>
<td>97</td>
<td>97</td>
<td>95</td>
<td>98</td>
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<td>98</td>
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<tr>
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<td>67</td>
<td>68</td>
<td>78</td>
<td>83</td>
<td>80</td>
<td>90</td>
<td>90</td>
</tr>
</tbody>
</table>

Table 7. Changes in proportion of market prices in consumer-goods prices

<table>
<thead>
<tr>
<th>Year</th>
<th>Consumer goods</th>
<th>Fuels</th>
<th>Total retail spending</th>
<th>Power, district heating, other household energy</th>
<th>Water rates</th>
<th>Rent, housing investment</th>
<th>Free-market turnover</th>
<th>Other services</th>
<th>Total personal spending</th>
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<tbody>
<tr>
<td>1968</td>
<td>13</td>
<td>0</td>
<td>17</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>21</td>
</tr>
<tr>
<td>1978</td>
<td>22</td>
<td>0</td>
<td>50</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>45</td>
</tr>
<tr>
<td>1985</td>
<td>36</td>
<td>2</td>
<td>-</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>57</td>
</tr>
<tr>
<td>1988</td>
<td>73</td>
<td>5</td>
<td>80</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>80</td>
</tr>
<tr>
<td>1990</td>
<td>91</td>
<td>9</td>
<td>84</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>85</td>
</tr>
<tr>
<td>1991</td>
<td>94</td>
<td>10</td>
<td>90</td>
<td>11</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>91</td>
</tr>
<tr>
<td>1992</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>40</td>
<td>40</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>93</td>
</tr>
<tr>
<td>1993</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>40</td>
<td>40</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>93</td>
</tr>
</tbody>
</table>

Source: The table was compiled by M. Lukács and E. Szabó Bakos on the basis of calculations by J. Pappné Ritter and the economic control department of Ministry of Finance, and the data from the Central Statistical Office of Hungary.

1. In 1993 prices for housing were free and there was an upper limit on rents.

A process of gradual and partial freeing of prices already began in Hungary with the 1968 reform. This accelerated in the late 1980s and particularly in the early 1990s, after the political changeover. (See Tables 6 and 7.) The process has still not run its course completely. For state price regulation continues not only in those fields that are usual even in the most market-oriented economies (such as cases of natural monopoly), but in other spheres as well. Nonetheless, the degree of price liberalization in Hungary is rather close to that prevailing in many mature European market economies.

Parallel with the deregulation and liberalization of price-setting, the gradual removal of price subsidies is taking place. Hungary, as a result, has now developed a relative price system that approximates closely to a market system of prices.
3.2 Improving the adaptiveness of production

The institutional changes listed will together cause production to adapt more flexibly and readily, and with less friction, to the prevailing market situation on both the supply and the demand sides. Remaining within the immediate subject of this study, I will discuss only excess demand. (The effect of excess supply is opposite in its direction.) The presence of excess demand will evoke reactions that will lead to the excess demand being overcome:

1. price adjustment, more specifically a relative rise in prices, and/or
2. quantitative adjustment, i.e., an increase in the supply and a decrease in the demand.

A quantitative adjustment may be induced either by direct perception of excess demand or by a price change. Price change can now exert a stronger effect because firms as well as households are now cost and price-sensitive. Some of the quantitative adjustment is short-term, using existing production capacity, and some long-term, requiring the creation of new capacity. Even if the desire to invest is present, the latter takes time. Meanwhile price adjustment and short-term quantitative adjustment will be used to overcome the shortage.

Readers will be able to trace point by point how the adaptive processes described here, well known from market theory, become dominant as soon as and in as wide a sphere as the first five institutional changes described in the previous section have taken place. The generators of price and quantitative adjustments are free entry and imports, freeing of the producers from the rigidities of planning commands, the imperative of profitability, and the free movement of prices.

As a result of these institutional changes, there develops the market situation known since the days of Adam Smith as sellers' competition; this replaces the earlier regime, which was marked by buyers' competition. The concept of competition was dimmed and drained of blood in the eyes of economists by the pure Walrasian theory of perfect competition. This name was given to an extreme, pure market situation in which atomized buyers and sellers conduct transactions, prices are set by anonymous processes, products are perfectly standardized, and so on. Perhaps people moving from socialism to capitalism may be able to sense more plainly that in the previous situation and in the new, true rivalry has occurred in most areas of the economy, so that not everyone is satisfied: there are winners and losers. Either the seller has an advantage over the buyer, or vice versa, the buyer has an advantage over the seller. The latter situation develops if any of the versions of imperfect competition apply on the market. This is the most widespread form of competition in all modern market economies, and this is already the situation in Hungary today. Let me sum up briefly the main characteristics of imperfect competition.

The seller offers the buyer a differentiated, not a standardized product. Although there are close substitutes for the product (otherwise he or she would be a monopolist), the offer differs from others' in quality, packaging, geographical proximity to the buyer, speed of delivery, conditions of payment, and so on.

With perfect competition, the seller is a price-taker, receiving the price from the anonymous processes of the market. With imperfect competition, conversely, the seller is a price-maker. However, attention must be paid in setting the price to the effect the price of the seller's own product will have on the demand. He (or she) faces a declining demand function, in which the higher the price goes, the smaller the demand for the product.

It can be shown in both theory and practice that a producer aiming to maximize profits under conditions of imperfect competition will set a price which is higher than the marginal cost; the volume of production, on the other hand, will be lower than the
quantity at which the unit cost is at its minimum. Producers will have excess capacity.
Thus, the seller is willing to produce more at the price demanded, provided the buyer is
willing to purchase more at that price. Thus, although the seller does not reduce the
price, he will try to win the buyer over from his competitors by other, non-price means.

The producer under imperfect competition competes for the buyer, tries to learn as
much as possible about his demands and adapt to them, advertises to draw attention
to his goods, seeks to arouse new demands with new, better products, and in these ways
hopes to gain an advantage over his rivals. He is the one who competes for the buyer’s
favour, reversing the situation in a shortage economy, where the buyer tries to win the
seller’s favour with flattery or bribes.

Stress is frequently and rightly laid in the theory of imperfect competition on the
aspects of this form of competition which lead to losses: under-utilization of capacity,
lavish advertising expenses, and rapid changes of models and designs. Buyers who have
just emerged from socialism, however, sense its advantages as well: there is a very strong
incentive for the seller to make efforts to win the buyer from his rivals.

The incentives mentioned may be produced not only by real rivals, but by a sense of
danger from a potential rival, through the entry of a new competitor. This idea is
explored in the theory of contestable markets.

Another aspect of true rivalry appears in Schumpeter’s theory of competition. According to his interpretation, the main agent in the process is the entrepreneur, who
tries to gain a cost and quality advantage over his competitors by making innovations.

The theories mentioned, which focus on mature capitalism, take as self-evident the
kind of behaviour in firms and producer-sellers that is aimed at gaining buyers. During
the post-socialist transition, however, this kind of behaviour is only just developing. This
is also clearly perceptible in Hungary, where “sellers’ competition” and the behaviour
demanded by rivalry are spreading. Yet many producer-sellers, not having grasped the
implications of the new situation, continue with their accustomed routine for a shortage
economy. Sooner or later, however, the seller will be obliged by the new market situation
to adopt new behaviour. The acquisition of adaptive behaviour is a learning process that
takes a long time.

There is one phenomenon to be mentioned that acts against the improvement of
adaptiveness. Among the institutional changes discussed in Section 3.1 is the hardening
of the budget constraint. This in the long term trains firms to adapt, but in the short term
it leads to frictions: a loss-making firm whose product cannot immediately be replaced
may fail, so that a shortage arises. The less were the barriers to free entry and imports
removed, the more this problem will arise.

3.3 Avoiding "runaway" demand
Another main cause of the reproduction of the shortage economy, apart from weak
adaptiveness of production, is a situation in which macro demand periodically runs ahead
of macro supply. This kind of constantly recurrent disproportion must also be overcome
before the shortage economy can be eliminated for good. Each and every change
discussed in Sections 3.2 and 3.3 constitutes a necessary condition for eliminating the
shortage economy.

What I term the running away of demand is a phenomenon in which some or all
firms or other economic agents do not feel themselves constrained in their purchases by
their own financial situation (wealth, income or ability to raise credit), and are prepared
to acquire as much as they can obtain of the resource, product or service they desire, or
as much as they are permitted to acquire by administrative means. The actual transaction
is limited by the physical supply, the selling intention of the producer or the
administrative quota, in other words one of these is the effective constraint, but the demand is not constrained in an effective way.

Of course there are upper limits on runaway demand as well; no one in their right mind wants to purchase an "infinite" quantity. But such upper limits have no significance, since they almost never turn into effective constraints; the essential point is that the runaway demand is almost always greater than the supply.

There are four components of macro demand that are liable to run away under classical socialism, and this is because the intrinsic attributes of the system induce them to do so. These intrinsic features that induce the running away are overcome by the reform and then the post-socialist transition.

3.3.1. The ending of investment hunger
Under classical socialism, there is an expansion drive that affects decision-makers at every level of the bureaucratic hierarchy, and this causes an insatiable investment hunger. There are always ministries, branch leaders or managers willingly inclined to invest. The chronic shortage ensures that they will always have a sales market, and the soft budget constraint exempts them from concerns about the profitability of the future production to be created by the investment.

The investment hunger did not cease during the period of reform socialism. The demand for investment was curbed administratively from time to time by those directing the economy. The investment hunger really came to an end when the institutional changes reviewed in Section 3.1 took place.

The insatiable investment hunger of the managers of the state-owned firms disappeared without trace when the budget constraint on them hardened and the future sales prospects for the products became uncertain. The expectations about privatization had an effect in the same direction.

Insatiable investment hunger never affects private firms, because of their very nature. They are obliged to weigh the likely risk of the investment: whether recent costs will be covered by later earnings, and bring a profit over and above them. Amidst the uncertainties of the transformation, with positive and in certain periods very high interest rates prevailing, the investment demand from the private sector is very moderate.

So looking at the economy as a whole, the investment hunger generated by the intrinsic attributes of the system has ceased; the investment component of macro demand is no longer liable to run away. This can be clearly observed in the Hungarian economy, where the share of investment in GDP, and even its absolute volume, have sharply declined.

3.3.2. The toughening of the export markets
Under the classical socialist system, demand for exportable products is also prone to run away, for several reasons.

The partner countries in "soft-currency" relations are shortage economies themselves, in which excess demand appears for many products. This means they are unexacting about quality and other criteria, and intent on importing as much as possible of the goods they are short of. As far as the domestic export behaviour is concerned, the undemanding Eastern market is convenient for both the foreign trading and the producing firm, and they too push for these exports. So it follows that the effective constraint with very many products is not the demand from the partner, but the supply in the exporting country.

In "hard-currency" relations, of course, there is an effective demand constraint in the partner country. But the demand can still be raised through price concessions made possible by subsidies. Since there is a great hunger for the imports that can be bought for
hard currency, and the economic leadership may also be hard pressed to service the country's foreign debt, they follow the principle of "exporting at any price and any cost", trying to divert as much domestic production as possible into exports.

So the intrinsic features of the classical socialist system ultimately cause the development of behaviour that makes the demand for exportable products liable to run away as well.

Hungary's reorientation towards the hard-currency markets began well before the change of political system in 1990 and the collapse of the CMEA trading bloc in 1991. However, at that time it was still possible to raise hard-currency exports through the targeted distribution of subsidies, and at least as a last resort, there was still the CMEA market as well. So to that extent the demand constraint was not consistently effective, and the tendency for export demand to run away had not been eliminated with complete consistency.

The change in this respect was only completed at the end of the 1980s. Especially since 1990, the hardening of the budget constraint speeded up, the relative weight of exports by private firms under a compulsion to make profits rose, and the subsidization of exports decreased. It became steadily less possible to apply the "export-at-any-price-and-cost" principle, and clear that the buying intention on the export market constituted a genuine effective constraint. Neither the intrinsic attributes of Hungary's domestic system nor the curious CMEA relationship between shortage economies was generating any longer a tendency for the demand for export products to run away.

3.3.3. The limiting of state spending
Government spending, the third great component of macro demand, is also liable to run away under the classical socialist system. All state bureaucracies are prone to overspending, and so this is not system-specific, but the classical socialist system differs from a parliamentary democracy in that it lacks a built-in mechanism to curb this desire to overspend. The government is not publicly accountable; there is no parliamentary opposition to criticize the government's spending plans beforehand and check the implementation of the budget afterwards. The state budget is compiled by the top leadership out of the public eye, as it sees fit. Since the central bank is subordinate to the same leadership, a budget deficit of any size can be financed by borrowing from the central bank - in other words by the inflationary means of printing banknotes. In that sense the budget constraint on the state is also soft. The documents put before parliament normally conceal the actual budget deficit, and in any case, parliament automatically gives its seal of legal approval to the plans presented by the leadership of the party-state.

This situation altered only after the change of political system. The bureaucracy's propensity to overspend remained, of course, and for this and other reasons there is always a danger that the state budget will be in deficit, as in fact it has been, as everyone knows. But this happens before the eyes of parliament, the auditor-general's office, the press and not least the public, and the international financial organizations (the IMF and the World Bank). This control puts a curb on the propensity to spend. In this sense it can no longer be said that there is no built-in mechanism for checking government demand.

3.3.4. An end to the hoarding tendency
A tendency for producers to accumulate stocks can be observed under classical socialism. Supplies of inputs are uncertain, and so all firms try to ensure continuous running of the plant by hoarding as much of their materials, semi-finished products and components as possible. This they can do with impunity, because they are insensitive to costs, due to the
soft budget constraint. This all makes the intermediate demand for producers' goods - another important component of macro demand - liable to run away.

Components 1, 2, 3 and 4 of runaway demand in the socialist economy combined form a curious kind of potential "monetary overhang". Though there are no liquid financial means available to investors, exporting firms, officials with control over government spending or firms accumulating stocks of imports to realize their excess demand immediately, they can still expect, given the supply or the administrative permit allowing the transaction to take place, that the money will be found somehow as well. Their potential ability to pay exercises excess-demand pressure with effects similar to those of repressed inflation. This potential "monetary overhang" is mopped up as a result of the institutional changes described earlier.

To sum up, the institutional changes gradually remove the mechanisms that generate, due to the intrinsic, internal features of the political and economic system, the tendency for certain main components of macro demand to run away. At this point the set of institutional changes can be taken to include not only the privatization, decentralization and deregulation considered in Section 3.1, but the other changes mentioned in this section as well: the ending of the special foreign trade relations with CMEA countries, and the public, primarily parliamentary control of the state budget and state spending. So when institutional changes are mentioned further on in the study, this extended set of changes is meant.

3.4 The role of personal income and consumption

The role played by the biggest component of macro demand, personal consumption, in reproducing the conditions of the shortage economy differs essentially from those of the four other components already discussed. Classical socialism has no intrinsic mechanism that necessarily generates a running away of household incomes, and so of household demand for consumer goods. This is the only major component of macro demand to be very strictly and effectively limited by the bureaucracy. There are effective incentives at every level in the hierarchy to enforce the maintenance of these limits.

Classical socialism is not necessarily marked by repressed inflation on the consumer market. There may be a persistent state in which there is no steady accumulation of unspent household income (unspent because it cannot be spent) and no development of a personal "monetary overhang". The planners strive to keep the purchasing power in the hands of the public, the supply of consumer goods and the set consumer price level reconciled, alongside the customary frequency and intensity of the shortage phenomena.

The word "necessarily" has been emphasized twice. For it is not impossible that the leadership of some classical socialist country may let the reins slip from their grasp, so that there is a real general excess demand for an extended period in the field of personal consumption as well. Forced saving due to shortage - monetary overhang - may accumulate. Since the consumer price level is more or less fixed, repressed inflation will appear in that case.

The situation alters in socialist economies that embark on reform. These countries suffer various combinations of repressed and open inflation, through the combined effect of the following factors.

The level of nominal wages rises, perhaps far more quickly than productivity. Pressure in this direction is exerted by the political liberalization, the influence of the workers' movements, and the shortage of labour, which is still characteristic in this period. The weakening party-state can only resist this wage pressure with less determination than the previous, more repressive regime did. The stronger the forces pushing up wages, the greater the excess consumer demand that can arise.
Table 8. Consumer price indexes in Hungary, 1980-1993

<table>
<thead>
<tr>
<th>Year</th>
<th>Average annual rate of change (in per cent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>9.1</td>
</tr>
<tr>
<td>1981</td>
<td>4.6</td>
</tr>
<tr>
<td>1982</td>
<td>6.9</td>
</tr>
<tr>
<td>1983</td>
<td>7.3</td>
</tr>
<tr>
<td>1984</td>
<td>8.3</td>
</tr>
<tr>
<td>1985</td>
<td>7.0</td>
</tr>
<tr>
<td>1986</td>
<td>5.3</td>
</tr>
<tr>
<td>1987</td>
<td>8.6</td>
</tr>
<tr>
<td>1988</td>
<td>15.5</td>
</tr>
<tr>
<td>1989</td>
<td>17.0</td>
</tr>
<tr>
<td>1990</td>
<td>28.9</td>
</tr>
<tr>
<td>1991</td>
<td>35.0</td>
</tr>
<tr>
<td>1992</td>
<td>23.0</td>
</tr>
<tr>
<td>1993</td>
<td>22.5</td>
</tr>
</tbody>
</table>


Either the government manages to withstand the inflationary pressure on prices, in which case the phenomena of repressed inflation are more prominent, or it cannot (or even does not wish to) withstand the inflationary pressure, for instance because it has a declared intention of liberalizing prices. In this case, an upward movement of prices will be induced both by the excess demand (on the demand side) and by the abolition of subsidies (on the cost side). The earlier price stability or repressed inflation will give way to open inflation.

Right up until the 1990 turning point, a curious combination of shortage and repressed and open inflation prevailed in Poland, with open inflation appearing to an increasing extent. This was brought to an end by the drastic stabilization measures introduced on January 1, 1990.

The processes in Hungary were far less extreme, taking place over a much longer period at a much steadier pace. (See Table 8.) There was already appreciable inflation in the 1980s, although it remained in single figures right up until 1987. After that the inflation speeded up, and continued to do so for a time after the political changeover in 1990. It reached its highest rate in 1991, with an annual inflation rate of 35%. Since then there has been some success in slowing it down, with the annual rate in the 22-23% bracket for 1992 and 1993.
Attention needs to be drawn here to the logical connections between the statements in the previous paragraph. The assertion being made is not that the commencement of inflation and then its acceleration were the cause and the elimination of the shortage economy the consequence. The shortage economy cannot be eliminated simply by setting the economy on an inflationary path, while the other characteristics of the economy remain unchanged. The line of argument in this study leads to a far more complex explanation than that. Both the elimination of the shortage economy and the inflation are consequences, and in fact consequences produced by partly identical, shared causes. But once the inflation has commenced and accelerated, it may have an effect on the shortage situation. The faster the inflation, the greater the reduction in the purchasing power of the money in the hands of the buyer (the real balance effect), so that if there was any "monetary overhang" it is absorbed.

This brings us back to the subject of the previous section, runaway macro demand. It is a necessary condition for eliminating shortage that there should be no runaway of personal incomes, either those of a wage nature or earnings from other sources. If nominal wages and other earnings increase unchecked, particularly at a time when the freeing of prices has not advanced far, shortage can become extremely intense. (This was the situation in Poland and in the Soviet Union and its successor states before the great financial reform.) This did not occur in Hungary because the price, wage and financial policy was more cautious in this respect to start with.

What factors can stop wages running away? If the budget constraint has hardened enough, for the state-owned as well as the private sector, wage pressure will be impeded by the firms' interest in surviving and maximizing their profits. Also acting in this direction is growing unemployment, an excess supply of labour. But bureaucratic restriction of nominal wages in order to prevent a runaway of macro demand seems to be essential until the institutional transformation and the new state of the labour market are in place. This occurred in Hungary, for instance, and in Poland, where firms paying wages judged excessive were subject to penal taxation. This bureaucratic restriction is not in itself a necessary condition for eliminating the shortage economy, which may occur without it as well. It is the kind of measure that will sooner or later become incompatible with the autonomy of firms and the efficiency of allocation. It is a typically transitional measure that can speed up the "tipping of the balance" from a sellers' market to a buyers' market.

Endnotes

1. This paper is being published in two parts, part 1 in Volume 3 (1) and part 2 in Volume 3 (2).
2. Above all I would like to thank my regular colleague Mária Kovács for her devoted assistance. I am most grateful to all those who commented on initial versions of this study, particularly for the valuable advice from Francis Bator, Zsuzsa Dániel, István R. Gábor, János Gács, János Köllő, Mária Lackó, John Litwack, Gérard Roland, András Simonovits, David Stark, Kata lín Szabó and Éva Várhegyi. I would like to express my gratitude to Brian McLean and Julianna Partl for the excellent translation. My researches were supported by the Hungarian National Scientific Research Foundation (OTKA), the European Bank for Reconstruction and Development, and Collegium Budapest, Institute for Advanced Study, for which I would also like to express my thanks here.
4. As a way of refreshing earlier knowledge and for a recapitulation of the debates on shortage, I recommend the following to the attention of readers: Kornai (1992, Chapters 11, 12, and 15), Hare (1989), and van Brabant (1990).

5. I already delved deeply into earlier works when I was writing Economics of Shortage. References to these can be found in the following works of mine: Economics of Shortage (1980, pp.29-30 and 133), and The Socialist System (1992, pp.228-229).

Here I would like to confine myself exclusively to recalling (for simplicity's sake in alphabetical order) the names of all the economists who have taken part in the analytical clarification in this field since 1980, and from whose works I have learnt a great deal: of the Hungarian researchers T. Bauer, A. Chikhán, Zs. Dániel, J. Gács, Zs. Káptár, M. Lackó, B. Martos, A. Simon, A. Simonovits, A. K. Soós, and J. Szabó, and of the foreign researchers J.-P. Benassy, R. J. Barro, J. P. Burkett, W. W. Charemza, C. Davis, S. M. Goldfeld, S. Gomulka, I. Grosfeld, H. I. Grossman, P. Hare, D. M. Nuti, R. Portes, R. E. Quandt, J. W. Weibull, and D. Winter. Those listed have published several studies, but for brevity's sake the list of references includes only a single, representative publication for each author not quoted elsewhere in this study.

6. The expression "illustrate" here implies that I am not promising a full and comprehensive methodology, but merely offering a few illustrations of practicable and effective methods of observation and measurement.

7. I first published this pair of concepts in my (1979) study. For literary antecedents of this see Kornai (1992, p.292).

8. The subject being considered in this dichotomy is the effective constraints on the instantaneous growth of production. It is another matter to say what factors determine the allocation of resources and the volume and structure of production in the long term, and what role is played in this by the demand and supply sides. This study does not deal with the latter topic.

9. To avoid any misunderstandings, let me stress that I am not examining here the ratio of total stocks to total production. This is a most important indicator as well, representing the efficiency of production and turnover and the sluggishness or smoothness in the coordination. Here the post-socialist economies of Eastern Europe still make rather a poor showing, but this is another matter. The subject of this study is elimination of the shortage economy, in analysing which the attention must be on the internal composition of stocks, i.e. the ratio of input stocks to output stocks, not the ratio of stocks to production.

10. Even in a mature market economy, it may be necessary to wait several weeks for the delivery of a car if the customer does not buy from stock, but makes special requests for a certain combination of various quality criteria (colour, equipment, etc.) But the length of this waiting period depends solely on organizational and technical factors, and cannot be considered a phenomenon of shortage. There is a "technical-cum-organizational waiting period" of this kind in Hungary as well, of course.

11. See the studies by Dániel (1989) and Buckley, Dániel, and Thalwitz (1993).

12. In this respect the course of China's transformation resembles Hungary's.

13. The reform of the socialist economy and the subsequent post-socialist transformation brought numerous other institutional changes that likewise contributed to eliminating the shortage economy; these will be mentioned at later stages in the study.
14. Here I ignore for now the existence of administrative constraints in certain segments and the fact that the presence of strong firms already operating in a market impedes the entry of a newcomer entrepreneur.
15. The figures include business organizations with legal entity and business associations and organizations without legal entity. Source: Központi Statisztikai Hivatal (1992, p.57) and (1994, p.94).
16. Import quotas are imposed for trade-policy reasons in many developed market economies. Restrictions are normally placed for protectionist reasons on products where domestic producers can fully supply the market. So under the circumstances the import restrictions do not generate a shortage.
17. On the history of import liberalization and its completion during the post-socialist transition, see the studies of Gács (1991b) and Gács (1994).
19. From time to time the government, presumably with an eye to political popularity, takes measures diametrically opposed to the general trend of liberalizing prices. An example was in 1993 the freeze on the rents for state-owned accommodation, which conserves the shortage phenomena and severe financing problems in this important sector.
20. Budget spending on consumer price subsidies was equivalent to 5.5% of GDP in 1986 and 0.7% in 1993. Muraközy (1993), p.39.
21. It was mentioned in Section 2.2 that the shortage phenomena have not yet ceased in certain sectors (e.g., health care). This is connected, among other things, with the fact that the institutional changes described under Points 1—5 above have not yet taken place in these sectors.
Here I merely record the situation. This study does not set out to decide to what extent it is desirable for these sectors to be privatized, decentralized and deregulated. There are several ethical, social and economic criteria in this connection that need weighing in conjunction with each other. However, the experience during the post-socialist transformation in Hungary confirms that without institutional changes pointing in this direction, the shortage in these sectors will remain, even though the shortage economy may be eliminated from the economic environment as a whole.
22. Smith (1776), (1898, p.43).
23. The pioneers of the theory of imperfect competition were Chamberlin [1933] (1962) and Robinson (1933). Of the present-day literature, I would mention particularly the works by Dixit and Stiglitz (1977), Hart (1984), Krugman (1979) and Kuenne (1967).
24. Here and elsewhere in this study, by seller is meant not only a trader, but a producer selling his own products as well.
25. Using the terminology of the "disequilibrium" theory, this can be expressed by saying that notional excess supply appears. The producer would be willing to sell more at the price demanded than he is actually able to sell.
26. Let me mention here Hayek's well-known argument: the great advantage of the market over bureaucratic control is the far stronger incentive it provides to obtain and utilize the information that lies scattered about.
27. The features of imperfect competition that induce these efforts are singled out by Scitovsky (1985) and Domar (1989). See also the study by Weitzman (1989), which makes an attempt to model the phenomenon.
28. See Baumol, Panzar and Willig (1982).
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30. The chronic excess demand for investment is confirmed in Lackó’s article (1989).
32. From time to time, the top economic leaders would place administrative limits on exports to the Soviet Union and other socialist countries, because it was not sure that Hungary would receive an appropriate offset payment. This ran counter to the efforts of leaders at lower levels who would have been glad to continue these convenient exports.
33. In my view this change cannot be viewed as a standard "external shock". The collapse of socialism led separately, in each post-socialist country, to profound internal institutional changes. On an international scale it was the same collapse that led to commotion in the trading relations between these countries and radical change in the nature of their future relations.
34. In 1989, the year before the first multi-party elections, the government of Miklós Németh made public the fact that the earlier budgets (and announcements concerning the stock of foreign debt) had been falsified. The budget deficit and the debt had been greater than the figures previously published. This event heralded in a way the even more substantial change in 1990. Thereafter it was plain that the state’s financial affairs could no longer be kept so easily hidden from the taxpayers.
35. The connection between softness of the budget constraint, shortage, and the hoarding tendency is demonstrated with a mathematical model by Goldfeld and Quandt (1990a) and Goldfeld and Quandt (1990b).
36. This steady change does not take place in a monotonic, unidirectional way. At the time of the reforms carried out within the socialist system, i.e., before the political change, certain tendencies for demand to run away speeded up even further, instead of slowing down. Effective limitation of macro demand can apply far more consistently after the political change has taken place.
37. If the four components of macro demand, mentioned in the previous section, are inclined to run away, the sum of them, the aggregate demand, will run away as well. This applies even if the fifth and largest component, consumer demand, has a well defined magnitude strongly controlled by the economic leadership.
38. The forced saving caused by excess demand for the products of the state-owned sector can be partly or wholly absorbed by the second economy and the black market. See Nuti (1986).
39. Even if partial excess supply of some products appeared, their prices still did not fall, being generally known to be sticky downwards. This asymmetrical behaviour of prices pushes up the general price level even further.

References


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