TRANSITIONAL ECONOMIES
DEVELOPMENT TRAJECTORIES AND GLOBAL CHANGE

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With 3 figures and 1 table

Zusammenfassung: Wirtschaftssysteme im Umbruch: Entwicklungsverläufe und globale Veränderungen

Der Begriff „transitional economies" war ursprünglich für Länder eingeführt worden, die ihre planwirtschaftlichen Systeme aus marktwirtschaftlichen Gründen ändern wollten. Recht treffend scheint er aber auch die Übergangslage der früheren sozialistischen Länder (wie auch die der meisten Länder Südeuropas oder Argentiniens, Mexikos und Brasiliens) im Weltwirtschaftssystem zu beschreiben. Betrachtet man gleichzeitig die technologisch hochentwickelten und die unterentwickelten Gesellschaften, so haben Länder mit „transitional economies" (CTEs) in vollem Umfang sowohl mit den typischen Problemen der mehr als auch der weniger entwickelten Länder zu kämpfen (Luftverschmutzung durch städtisches und industrielles Wachstum, Vernachlässigung der Natur in ländlichen Gebieten und Bergbauregionen etc.). Auf diese Weise leiden sie selbst unter einer doppelten Umweltbelastung und tragen in entscheidender Form zu den globalen Umweltveränderungen bei.

Im gegenwärtigen Stadium der Industrialisierung bilden die CTEs eine riesige Konzentration ressourcenabhängiger Industrien und Schwerindustrien, oft mit veralteten technologischen Grundlagen. Der radikalste Weg zur Lösung der Umweltprobleme ist eine generelle ökonomische und räumliche Umstrukturierung, gefolgt von der technologischen Modernisierung und der Entwicklung einer speziellen Umweltgesetzgebung. In CTEs bestehen große Hindernisse und Schwierigkeiten für diese Modernisierung und Umstrukturierung, die noch aus der Planwirtschaft und dem sozialistischen politischen System stammen. Es ist daher von grundlegender Bedeutung, zwischen diesen überkommenen Strukturen und Trends zu unterscheiden, die einem bestimmten Entwicklungsstand entsprechen und die durch die Logik der ökonomischen Entwicklung diktiert worden sind.

Die Beschleunigung der ökonomischen Neustrukturierung in den CTEs ist untrennbar mit den Problemen globaler Veränderungen verbunden und ist daher von großer Bedeutung für die gesamte Weltgemeinschaft.

Introduction

Profound changes in the former socialist countries have given rise to the re-organization of the entire world economic and political system, to re-consideration of the spatial division of labor and to re-assessment of geopolitical positions of different countries and blocs. The new hierarchic scheme based on the type and level of economic development inevitably comes to replace the transitional political division of the world. Hence, the term "countries with transitional economies" (CTE) which is increasingly used to denote the former socialist countries adequately reflects the nature of the present stage of their development (KORNAI 1991; KUKLINSKY 1992, et al.).

The term "transitional economy" may have two meanings. On the one hand, it is used, above all, to denote transition from planned to market economy. On the other hand, the term reflects precisely the "intermediate" role of the former socialist countries in the world economy whose level of development was inferior to that of major western industrialized nations but was superior to most developing countries.

Shifts in the economic structure: patterns and specific features of CTEs

The trajectory of the world progress indicates that any pre-industrial society is sooner or later transformed into an industrial one, which is followed by a post-industrial stage even though different countries do not pass through the phases of this evolution simultaneously. The spectrum of differences between the countries at present are tremendous: on the one hand, there are highly-developed western nations that already may be regarded as post-industrial; on the other hand, we see the poorest of the developing countries only now embarking on the road to industrialization. Alongside these, there is a large group of countries with more or less old traditions of industrialization with different degrees of maturity of the process. Judging by the type and dynamics of their development, the countries of centrally-planned economy fall into this particular group.

If we analyze the dynamics of macroeconomic structure in the indicators of employment in the last few decades, several types of trajectories representing the change of priority economic sectors will be revealed. This processes were in details studied by TREIVISH, who followed the logic and rates of shifts in various countries of the world and former Soviet republics (TREIVISH et al. 1993). According to his scheme, there

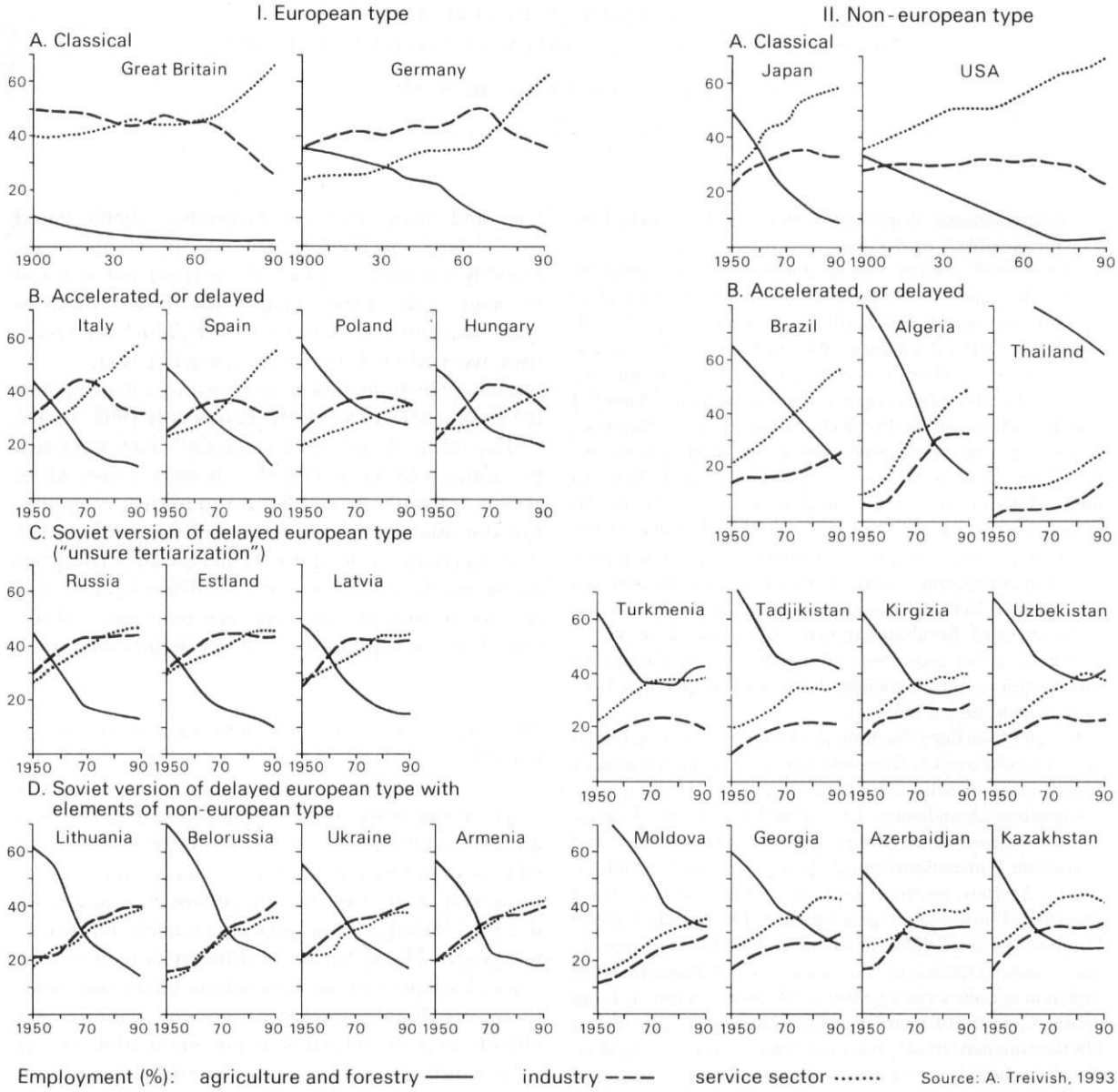

Fig. 1: Trajectories of macrostructural shifts in different types of countries
Source: A. Treivish et al. 1993 (revised)
Verlauf makrostruktureller Veränderungen unterschiedlicher Ländertypen

exists a classical European trajectory of transition from pre-industrial to post-industrial structures with a long domination of the secondary industrial sector (Fig. 1). In major old industrial countries, this period lasted up to 50–75 years and in England even longer. A definite reversal of trends was demonstrated in these countries by the early 1970s, when the share of industry in their economies gradually began to decline against the backdrop of service sector, especially business services, research and development, administration etc. (Tab. 1).

Non-European trajectories, first demonstrated by the United States and then repeated by Japan and most of the third world countries, are characterized by the absence of a stage with an industrial sector domination. Under an originally different type of industrialization the leadership of the primary agrarian sector was at once followed by that of the tertiary one.

Table 1: The dynamics of sectoral structure of employment in different types of countries (1960–1990, %)
Dynamik sektoraler Arbeitsmarktstrukturen verschiedener Ländertypen (1960–1990, in %)

Countries	Sectors	1960	1965	1970	1975	1980	1985	1990
USA	agriculture/forestry	8,3	6,1	4,4	4,1	3,6	3,1	2,9
	industry/construction	33,6	33,4	32,2	30,5	30,5	28,0	26,7
	services	58,1	60,5	63,4	65,9	65,9	68,8	70,4
France	agriculture/forestry	22,4	17,7	14,0	10,3	8,7	7,6	7,2*
	industry/construction	37,8	39,4	38,8	38,6	35,9	32,0	27,3
	services	39,8	42,9	47,2	51,2	55,4	60,4	65,5
Portugal	agriculture/forestry	43,6	37,5	31,7	33,9	27,3	25,2	17,9
	industry/construction	28,9	30,4	32,2	33,8	36,6	37,5	34,3
	services	27,5	30,6	33,2	32,3	36,1	41,5	47,8
USSR	agriculture/forestry	38,8	30,9	25,4	22,7	20,2	19,4	18,1
	industry/construction	32,4	35,4	37,9	37,9	38,5	38,4	38,0
	services	28,8	33,7	36,7	39,4	41,3	42,1	43,9
Poland	agriculture/forestry	44,1	39,4	34,6	30,6	29,7	29,1	27,5
	industry/construction	32,4	35,4	37,6	39,7	38,9	37,7	36,5
	services	23,5	25,2	27,8	29,7	31,4	33,2	36,0
Brazil	agriculture/forestry	52,0		44,9		31,2		24,2**
	industry/construction	18,4		21,8		26,6		21,6
	services	29,6		33,3		42,2		52,5

* 1989, ** 1988

Sources: Labour Force Statistics, Paris 1974; 1987; Yearbook of Labour Statistics, Geneva 1991; Statistical Yearbook for Latin America and the Caribbean 1991, N 4; Statistichesky jeszegodnick stran-tchlenov SEV, 1976, 1988; Narodnoye chozjaistvo v SSSR v 1990, M. 1991; Rocznik statycny, Warszava 1990

Here tertiarization looked like a process historically preceding industrialization. Such types of trajectories in various modifications (accelerated or delayed) are typical not only for developing countries but likewise for the southern republics of the former USSR, first of all, for the Central-Asiatic and Caucasian ones.

European republics of the former USSR as well as the rest of Eastern Europe and other newly industrial peripheries of the continent (Italy, the Balkan and the Iberian peninsula) are represented, in terms of Treivish, by a "compressed" (accelerated or delayed) modification of the European trajectory. They have the same logic of shifts as the old industrial leaders but pass it in shorter time. The period of industrial sector domination lasted in Poland and Hungary 20 years, in Italy up to 15, in Spain about 10 years. In Eastern Europe the first signs of de-industrialization have only appeared in the last few years, the entire pattern of structural shifts still being consonant with the industrial phase of development.

It is interesting that Russia and Northern Baltia (Estonia and Latvia) are distinguished by a specific, typically Soviet feature – falling rate of shifts in the last decades. Unlike other East-European and, moreover, western countries, the gap between shares of service and industrial sector is not growing so fast here. Hardly exceeding industry, the service sector has almost stopped to increase in share. Such a special version of the European trajectory is named by Treivish as "an unsure tertiarization". He associates it with a negative, or at least, indifferent attitude of Soviet administration to this process unlike the previous, industrial one, which was unsually supported (also because of ideological reasons).

Thus, according to the trajectory and parameters of macroeconomic employment structure the East European states appear to be in the same category with seemingly so different South European (Portugal, Spain, Greece) and some countries of Latin America.

Using the terms of Wallerstein, this group of countries could be ranked among the world "semi-peripheries", which serves as an important link between "core-economies" and real "peripheries" in the international division of labour (Wallerstein

1974, 1984). According to WALLERSTEIN, this link provides the flexibility and stability of the global hierarchie. The intermediate level of semi-periphery exploits and is exploited. The origin of the development of the core economy lies in its relation (the withdrawal) of surplus value.

Despite the individual peculiarities of the above regional types, all these countries combine traits of a relatively high development level and of socio-economic backwardness, thus forming a large heterogeneous group united by a number of common features. The principal features are:

1. Dualism of economy, i.e. promotion of advanced sectors and orientation to western consumer-oriented culture and, at the same time, conservation of the traditional backward sectors and spheres of activity.

2. High employment in production sectors of economy (primary and secondary), which, taken together, are 1.5–2 times larger than the service sector. In highly industrialized nations, the reverse is the case.

3. High share of resource and raw materials sectors, the economy being highly energy- and resource-intensive.

4. Sharp regional contrasts as a result of comparatively high spatial concentration of population and economy, especially of environmentally unfavorable basic industries.

5. Poor development of own innovative, or creative functions capable of giving an impetus to profound and rapid economic modernization and because of that a stable dependence on the western countries, in one form or another.

The latter never manifested itself in CTEs as clearly as it did in other countries because the existence of the "iron curtain" for years impeded integration of socialist countries in the world economy, held back or blocked completely the inflow of foreign capital, torpeding the rise of a direct dependence on the West. However, the technological and economic dependence was increasingly apparent already before the fall of the "iron curtain". Strange as it is, the dependence was the result of the energy crisis which presumably hit the West most. However, in the case of the West, the crisis has become a catalyst for rapid adoption of advanced technologies, growing investment in the resource- and, especially, energy-saving sectors as well as for transition to a post-industrial stage of development. On the contrary, in CTEs, the aforesaid dependence has actually delayed radical restructuring of economy by a whole decade.

Thus, the USSR has fallen a prey to its own oil exports. Petrodollars that seemed so easy to earn in the heat of the energy crisis were used to purchase food grains, consumer goods and equipment, which did not encourage promotion of domestic industry at all. The preference developed for western imports became also ruinous to other East-European countries that were poorer in raw materials – Hungary, Poland, etc. As a result, both the USSR and those countries found themselves in a position of debtors and technological satellites of the West even before the outbreak of revolutionary events in the late 1980s. It was the decade of CTEs' economic existence at the expense of massive export of resources and energy carriers that aggravated stagnation and made the transition to a new economic system so difficult.

The experience of the reform of the last few years has shown that economic and technological dependence of CTEs on the West does not disappear after the removal of political protectionist barriers. The forms of such dependence, however, changed. Even with orientations at lower resource- and energy intensity of economy and encouragement of modernization, most CTEs tend to assimilate "adaptive" functions, viz. promotion of new or reorganization of existing sectors based on the use of approved western technologies. Such an "implantation" of innovations is currently a characteristic feature of all countries of medium industrial development.

At the same time CTEs are characterized by a number of specific features inherited from the administrative-planning system and distinguishing them from other countries with a similar type and level of development. The most important among them is a large-scale development of high-tech sectors (mostly, within the framework of the powerful military-industrial complex) induced, among other things, by the need to maintain the political system status. A rather high educational level of the population, even if compared with industrialized countries, is followed by a comparatively low labor productivity.

At last along with high resource-intensiveness of economy and high share of heavy industries, CTEs are characterized by technological backwardness which is due not only to lack of investment required for restructuring, but also to the lack of appropriate incentives with manufacturers.

The deformed economic structure, with poorly developed methods of raw material processing and the pattern of foreign economic relations, were also supported by the system itself: free availability of natural resources engendered a myth of resource infiniteness and did not stimulate enterprises to undergo modernization and reduce the resource- and energy-intensity. To a great extent, such views were encouraged by

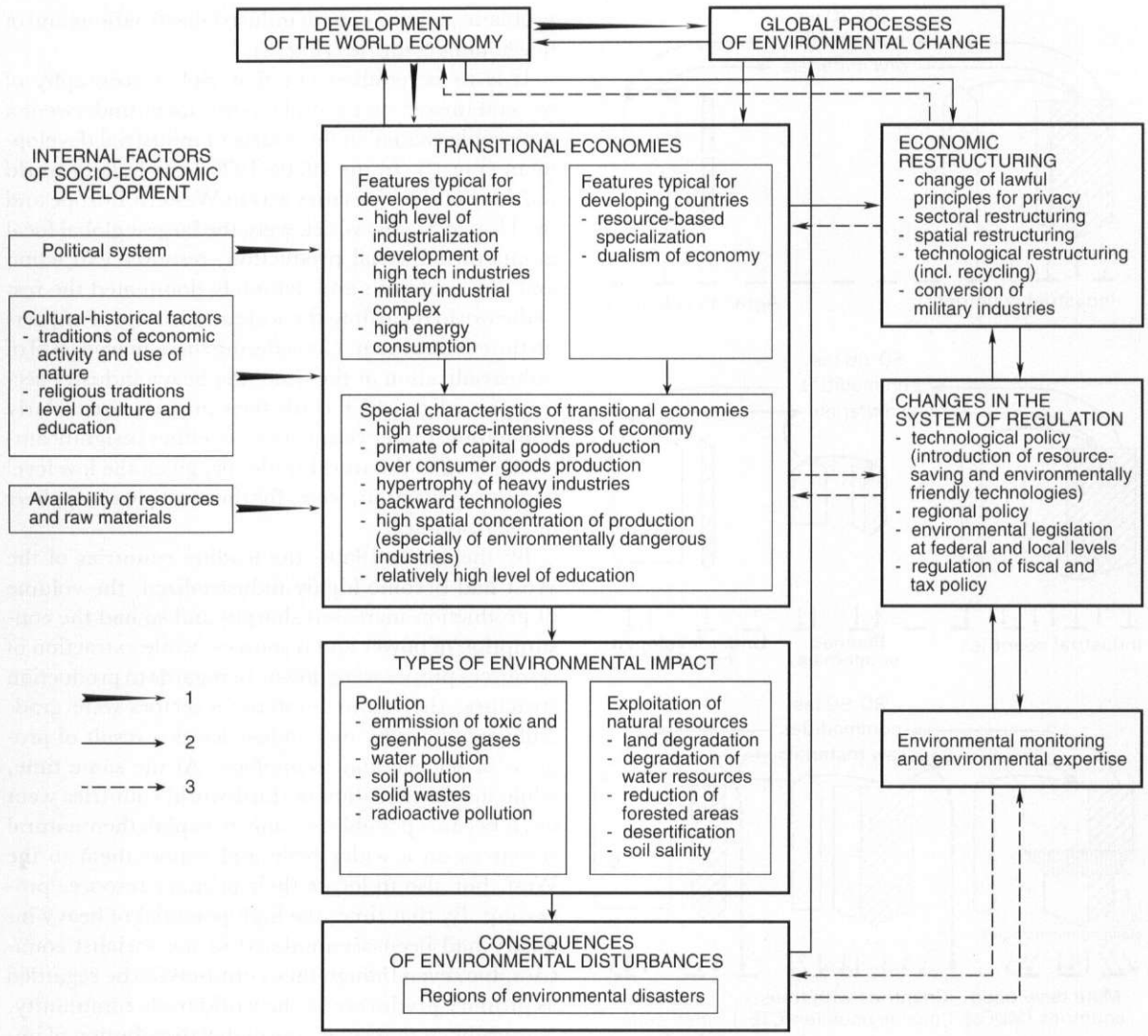

Fig. 2: Countries with transitional economies in the system of global interactions between society and environment (diagram)

1 = strong external impacts, 2 = existing relations, 3 = unstable and expected relations

Source: O. Gritsai a. V. Kotlyakov

Länder in ökonomischen Übergangsstadien im System globaler Interaktionen zwischen Gesellschaft und Umwelt (Diagramm)

orientation to home-made, albeit low-quality, raw materials and by the distorted system of prices for raw materials, semi-products and finished items. Finally, the irrational location of industries, excessive specialization, production and territorial concentration have now become the cause of regional monopolism and selfishness, making the normal functioning of the economic mechanism difficult and, at times, impossible.

The role of CTEs in the global environmental change

The dualism of CTEs' economies also leaves an imprint on their role in the global environmental change. As CTEs combine traits of both industrialized and developing countries, they appear to be under a double environmental pressure: pollution of the environment by industries and urban areas, which is more typical of industrialized nations, and degrada-

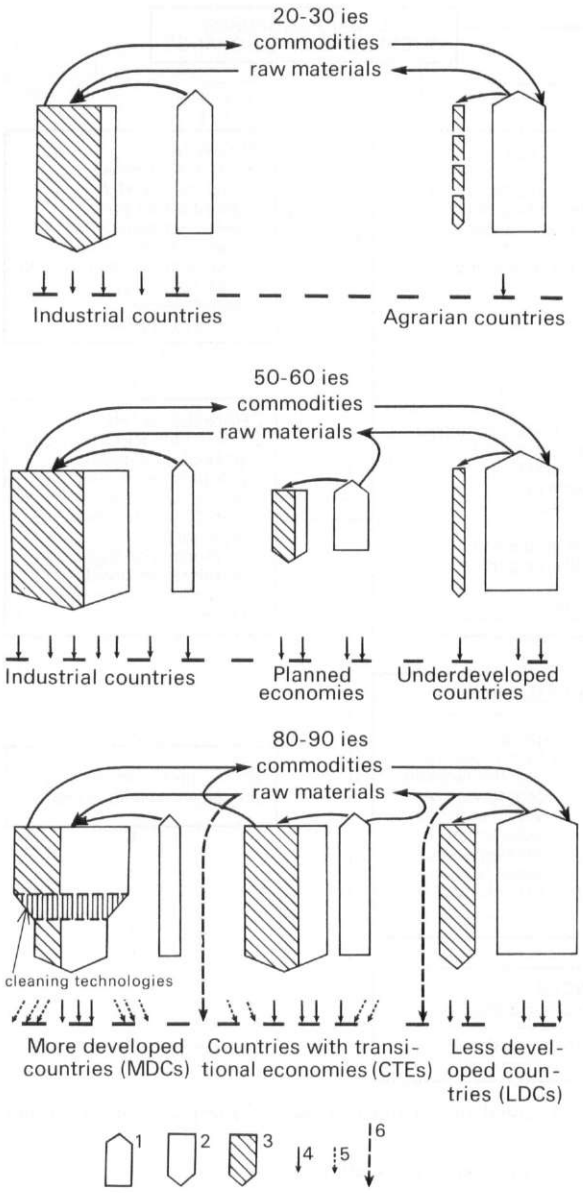

Fig. 3: Growth of global environmental problems in the 20th century. Types of interactions between society and nature

1 = extraction of resources, 2 = productive activity, 3 = share of heavy industry, 4 = traditionally industrial, 5 = non-traditional (heavy metals, radiation, etc.), 6 = pollution produced in the course of raw material transportation

Wachstum globaler Umweltprobleme im 20. Jahrhundert. Interaktionstypen zwischen Gesellschaft und Natur

tion of resource-based and rural areas as a result of their over-exploitation. As a result of this, CTEs feature, practically, the full range of environmental problems, typical of both industrialized nations and of developing countries (Fig. 2).

It is to be pointed out that global geography of societal impact on natural environment underwent a noticeable change in the course of industrial development (Fig. 3). In the 1920s–1930s, the bulk of world industry and major cities was in Western Europe and the United States, which were the largest global focal points of industrial production, resource extraction and consumption, and definitely dominated the rest of the world regarding the scale and variety of impacts on the environment. Considering the achieved level of industrialization at the time, the heavy industry sectors prevailed, which made their impacts particularly dangerous. Other countries were either insignificantly involved in the world trade, or, given the low level of industrialization, were, for the most part, suppliers of the resources.

By the 1950s–1960s, the leading countries of the West had become highly-industrialized, the volume of production increased sharply and so had the consumption of power and resources, while extraction of resources proper went down. In regards to production structure, the resource-intensive sectors were gradually eased out by new industries as a result of progress in science and technology. At the same time, while industrialization of third-world countries went on, it became possible not only to exploit their natural resources on a wider scale and export them to the West, but also to locate their primary resource processing. By that time, the high potential of heavy industry had been accumulated in the socialist countries, too, even though they continued to be regarded as primary producers by the world trade community. Naturally, at that stage, the global distribution of impacts on natural environment proved to be more uniform despite the different level of technologies applied and the degree of environment vulnerability.

In the 1980s, there occurred a notable change in the situation. Industrialized nations stepped into a post-industrial stage of development and, little by little, reduced to a minimum their heavy industry. It began to be eased out to the periphery of the world economy. Fundamental industrial restructuring, catalyzed by the energy crisis of the mid-1970s and followed by wide-scale introduction of sewage treatment facilities and non-waste technologies enabled these countries to reduce the pressure of many traditional environmental problems (CO2, SO2, NOx emissions) or at least to stop growing fears for environmental disasters prophesied at the end of the 1960s – beginning of the 1970s (remember the Roman Club warnings). It was balanced by the growing importance of new types of

pollution, relating to new industries and activities, e. g. emissions of heavy metals (Fig. 2).

Gradually, the global center of gravity of environmentally hazardous industries is shifting to the less developed nations which are still in a phase of active industrialization and which are being through a stage that the West passed several decades ago. East-European countries now find themselves among these "transitional" countries, too. Moreover, East-European countries feature a considerable share of industry, definitely marking them out against the general worldwide background. This is especially true for its heavy, potentially "dirty" sectors. In this respect these countries have left behind the industrialized West, the third world and most of the so-called new industrial countries. Having inherited from the West the entire set of environmental problems, while maintaining a high potential of resources and raw materials, CTEs are now in the center of current global problems, representing all types of traditional and non-traditional impacts.

Perspectives and constraints of modernization: technological policy and cultural environment

This begs the question of the extent to which, by logic of economic history, all countries should consistently pass through the same industrialization phases as did the West, including the "dirty industrialism" stage. In this context the example of new industrialized nations (South Korea, Philippines, etc.) has been frequently quoted lately. Their rapid development is above all due to the labor-intensive sectors and industries located in those countries by major western companies. Experience of this nature, apparently, may be useful only to countries about to enter the industrial phase and to regions of high density of population in rural and small-town areas, especially in Asia and Africa. However, it is hardly applicable to countries which already made investment in early industrialization and built up a sizeable potential of heavy industry.

Expericence of the West shows that whatever the development trajectory, prerequisites for transition to any subsequent stage mature within the preceding one. As for European CTEs, burdened by the accumulated potential of old heavy industries and following the classical European trajectories of structural shifts, this conclusion means that on their way to a post-industrial society they seem to come via a highly industrialized society. Accordingly, the structural shifts in CTEs at present must, above all, be aimed at rapid passage of the "high-tech industrialism" stage. There must be no illusions that the stage can be skipped, all the more so that most CTEs have either almost reached it or stepped into it already. This is the key to gradual but comprehensive solution of CTEs' acute environmental problems that ceased to be their domestic affair but rather became a matter of concern for the world community.

However, the restructuring of the economic and political system as such cannot adequately ensure a desired rapid modernization of economy unless a specific scientifically grounded technological and regional policy is adopted. These two types of policy exist and supplement each other in all developed countries. The first is usually aimed at a most efficient utilization and accumulation of the potential of advanced structural and spatial economic units associated with promotion and diffusion of the latest achievements in science and technology (the new economic sectors, highly developed areas where these sectors are concentrated, especially research and development industries, etc.).

Regional policy, on the contrary, is purposed to mitigate the social impacts of spatial inequality that emerges and becomes increasingly aggravated in the course of locational restructuring. This policy is intended, in the first place, to support the critical and backward areas to avoid social tensions.

It must be remembered, however, that many of the problem areas (above all, centers of heavy industry), having passed the stage of "maturity", are only stepping into the real structural crisis, while their western counterparts experienced such a crisis almost 40 years ago. Structural crisis combined with a national one appears thus to be much more severe than in the West, although according to the logic of economic development, a long and complicated period is needed to overcome it (Gritsai et al. 1991; Nefedova et al. 1992).

Hence, it is very unlikely that environmental problems of these areas will be resolved comprehensively in the next few years, although there still is a chance to prevent the transformation of environmental crisis areas into areas of environmental disasters and catastrophes. To achieve this, the following measures are necessary: at least, technological restructuring, introduction of new sewage treatment processes, closing down absolutely hopeless enterprises (having no treatment facilities) and introduction of more rigorous environmental restrictions. Yet, even in this case, while the prospect of the inevitable and growing structural crisis is realized by all, the revival of such old industrial areas may only take place if the

elements of the newest economic sectors are located there, if the development of own research base is stimulated against the backdrop of a powerful business-promotion and social infrastructure being created, all of which may in future give a fillip to a fundamental renovation of the economy.

One important genetic feature of CTEs' large industrial regions must be pointed out that makes their modernization so difficult at present. Many of these were set up as part of crash industrialization programs later than in the West, using the approved technologies. This made it possible to put into operation high-capacity individual projects, heavy-duty plants, inter-sectoral complexes featuring a high concentration of closely related elements of the same block of industries, now finding themselves in a state of depression. At present, the poor state of development of other industries that do not depend on the core sectors, and the weak social and environmental infrastructure aggravate further the aftermath of the crisis, by disallowing amortization of regional economy in a critical phase.

Technological restructuring and, consequently, improvement of the environmental and economic situation in CTEs are hampered not only by the lack of proper strategy and underutilization (or, occasionally, barbaric over-exploitation) of the most advanced economic sectors and regions. A still greater impediment is the physical absence of investment for modernization and putting new cleaning technologies to commercial use. These are inertia of centrally-planned economy and mentality oriented at equality rather than efficiency; low labor productivity; political instability, restricting domestic and foreign investment; regionalism and disintegration processes, and, finally, lack of environmental legislation culture.

Thus, when evaluating the economic and environmental situation in CTEs and determining most realistic and efficient ways of modernizing their economies, it is important to distinguish between problems generated by the administrative-command system over the past years, and others reflecting the real role and place of these countries on the axis of world development. This will allow a sounder view of many seemingly adverse processes currently attributed to mistakes of the politicians. These include the fear of penetration by western capital, the danger of a "branch-plant" economy and greater dependence, the growing social stratification of the society, etc. In fact, however, all this is inevitable at the present transitional stage, if looked upon from the standpoint of the world economy.

However, one should remember another factor capable of affecting the technological restructuring, alongside the purely economic mechanisms: the cultural and historic environment of a particular region that determines the labor ethics, traditional systems of values, way of life, response to new trends.

In this respect, even with numerous of common features, the group of countries with transitional economies is far from being uniform, first of all regards their flexible adaptability to technical innovations and capacity to assimilate new forms of labor and new social relations in society.

On the one hand, this adaptivity strongly correlates with how deep the roots of socialist mentality are, how stable the social features inherited from the socialist system are, how long this system dominated in this or that country.

On the other hand, many of the differences have much more deep roots in history, resulting from old and stable gradients in density of population and economic activity, level and traditions of urbanization, cultural, historical and even confessional features.

Economic modernization spreading from the leading world centers of technological progress, among them, Western Europe, inevitably brings with it social and cultural traits of the western world where it belongs. Naturally, the adaptability of a particular area to western social and technological innovations depends, to a great extent, on the capacity to assimilate or modify those traits, which also include the type of spatial behavior, i. e. on the "viscosity" of the cultural and historical environment. It is partly for that reason that in Hungary and Czechia, which are more similar to the western world by the type of settlement (with traditions of diffused urbanization), economic activity, confessional structure and which are strongly related in their history with the history of West-European empires. On the contrary, reforms are far more difficult in less urbanized South- and East-Slavonic territories, with a different role in history of Europe and gravitation to the Orthodoxal Byzantenean world by origins of their culture.

In this connection, it is not by chance that when assessing the prospects of possible investments in Eastern and South-Eastern Europe, the West displays a particular interest to the so-called East-European zone of transition, especially to countries dominated by Protestant-Catholic culture. The factor of cultural medium with deep-seated traditions of labor ethics, spatial and political behavior, is now generally overestimated although one largely deals here with geopolitical ambitions (e. g. Seiler 1993). In this context as far as the area of the former USSR is concern-

ed, the better chances of earlier economic recovery are rather attributed to the western areas (the Baltic states, parts of the Ukraine and Byelorussia). It is explained by a strong Protestant or Catholic influence which in many cases is taken for a crucial factor despite their comparatively recent history of industrial development and a lower, on average, economic density than in the European Russia.

It would certainly be wrong to absolutize the significance of this cultural barrier. Initially, the Catholic-Protestant world itself was far from being homogeneous in its innovative potential. However, ultimately, the achievements of western modernization, which at the early stage of capitalism had obviously been the prerogative of Protestantism, were adopted later not only by the Catholic Europe but even by the remote Asian worlds. All the more reason to expect these achievements to be easily assimilated by East-Christian cultures closer to the West, many of which either have passed or are passing the peak of industrialization and urbanization and are on the threshold of post-industrial shifts.

Conclusion

Thus, having embarked on the profound restructuring of the socioeconomic system and realizing the need for rapid modernization, CTEs will, in the next few years, remain, as before, an important *dramatis personae* in the system of global changes. Strategically, their contribution to global environmental changes in large measure depends on the evolution of their functions in the world economy being governed by a certain logic of the worldwide economic development. On the other hand, from the tactical standpoint, i. e. in the next few years, it will be very closely tied up with the formulation of national environmentally-grounded structural and regional policy conducive to resource-saving and nature conservation.

A summary scheme in Fig. 3 shows the CTEs' current features and mechanisms driving their contribution to global environmental change.

The role of transitional economies in the world division of labour is determined by complex and complicated interactions between factors, combining elements of development and underdevelopment and modified by very special characteristics inherited from the socialist past. Economic transformation, as well as the transformation of CTEs' environmental impact, is influenced by strong external dependency upon the development of the world economy itself but at the same time is also dependent upon important internal factors, such as political changes, cultural-historical environment, availability of resources and raw materials.

The only way to mitigate the growing environmental problems produced by transitional economies is to accelerate economic restructuring in its different dimensions (sectoral, technological, spatial), to improve the existing legislative system, to introduce different types of state policies (technological, regional, environmental ones, fiscal and tax policy) able to be an efficient instrument to control and regulation. At the same time there exists a vicious circle: stable economic and environmental situation can exist only under a strong state but to make a state strong means to provide economic and environmental stability.

The present stage of CTEs' development is marked by the inevitable political struggle and attempts either to force the economy back to the Procrustean bed of the planning-and-distribution system or switch to free market relations of the western model as fast as possible. Neither of these extremes holds a promise of resolving the main social and economic conflicts of Russia and other post-socialist countries. It will require a consistent and deep-rooted restructuring of the entire economy, coupled with sustainable political and regional organization of society to resolve the major problem of worldwide importance: transfer of CTEs to a stage of high industrialization, and on to a post-industrial stage of development, whereby the current resource- and energy-intensive stage of "dirty industrialization", damaging the global state of the environment, will be shortened to a minimum.

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