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PRIVATIZING THE POLISH ECONOMY: BENEFITS AND THREATS TO THE NATURAL ENVIRONMENT

The author starts with presenting some methodological issues which should be the point of reference of any research on the ecological aspects of the transition from command-and-control to a market system, as well as with presenting the factors of natural environment degradation in Poland under the socialist economy. The latter were connected both with the very nature of this economy (and the development pattern related to it) and the inability of narrowly conceived ecological policy to oppose ecologically negative outcomes of the economic development. Following this, some general market economy related potential sources of the improvement in environmental quality have been highlighted.

The author points out both the potentially positive ecological consequences of privatization and the problems and dangers that actually appear, or may be expected to appear. In particular, the beneficial ecological effects to be expected as the privatization related changes in the economy's sectoral and branch structure have been pointed out. Within the analysis of actual and potential ecological threats of privatization, the author highlights the issue of ecological liability of private firms, taking into account the distinction of liability for current pollution and past contamination. Following this, the transfer of ecological obligations in different privatization procedures and paths has been discussed.

The final section of the paper is an attempt at outlining whether and to what extent the privatization contributes to the implementation of Sustainable Development principles and goals.

1. INTRODUCTORY REMARKS – THE PROBLEM OF IDENTIFICATION OF ECOLOGICAL EFFECTS OF PRIVATIZATION

The presented paper is not intended to be a comprehensive analysis of the conditions and impact of the privatization process on the current state and tendency of changes in the quality of the natural environment in Poland. It is only an attempt at outlining the most important, in the author's opinion, ecological consequences of privatizing the Polish economy, as well as suggesting certain issues to become the subject of future theoretical analyses and practical studies.

Research on ecological aspects of privatization of the Polish economy (or any other economy in the period of transition from command-and-control system to market economy) should be based, in my opinion, on the following theses:

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1. Ecological outcomes of privatization may not be "isolated" from these environmental consequences and also conditions of system transformation processes which are connected with macroeconomic stabilization, demonopolization and restructuring, substantial reform of basic macropolicies (above all price, tax and commercial policies) and of sectoral policies: industrial, energy, agricultural, transport, and other.

2. An important reference for research on the relations between privatization and natural environment is the determination of system factors of environment degradation in command-and-control socialist economy, with regard to the specific character of development pattern adopted in our country, especially the pattern of industrialization.

3. The ecological impact of the privatization process must be clearly distinguished from the environmental consequences of the presence in the economy of a sector of mature private enterprises whose behaviour patterns are fully adequate to market competition mechanism, scarce resources allocation or price and technological substitution. One can even venture a statement that at the present stage of system transformation of the Polish economy, the reaction to market incentives of a vast majority of enterprises, privatized or undergoing ownership transformation process, as well as state-owned ones, does not agree with the standards described in textbooks on microeconomics.

4. The ecological impact of the privatization process may significantly differ in the long and short run. In the long run, ecologically advantageous effects may prevail, relative to the general improvement of economic efficiency that goes along with commercialization and privatization of state-owned enterprises. In the short run, i.e. in the period of privatization proper, numerous dangers to the natural environment may occur, mainly connected with the lack of or imprecise regulations about environmental protection in legal acts controlling the course of privatization processes (see particularly *Schedule... 1994*).

5. A misleading (or even harmful for ecological policy) illusion is the conviction of many liberal economists and politicians, that if the socialist economy system had led to advanced degradation of natural environment in Poland, transition to a market economy will automatically solve the basic ecological problems. Moreover, the view concerned is comparable to the declarations promoted at the beginning of the 1990s that the market economy did not need any industrial or energy policy. In short, that opinion is false because a market economy based on the dominance of private ownership is also characterized by numerous market failures in the sector of environmental protection and management of natural resources. These include, first of all, the inability of market mechanism to make the scale of environment utilization

consistent with the requirements of ecologically sustainable development. It should be noted here that a vast majority of the developed market economy countries underwent stages of considerable degradation of natural environment during their development. Therefore, while acknowledging the ecologically positive results of the privatization process (which will be shortly elaborated in a further part of the paper), it should be clearly stated that the improvement of the natural environment in Poland is not and will not be possible without ecological policy makers precisely addressing these issues which result from ecological external diseconomies, i.e. market failures in the area of environmental protection.

2. TRANSFORMATION OF ECONOMIC SYSTEM IN POLAND VS. THE NATURAL ENVIRONMENT

The factors of natural environment degradation in Poland during period of socialist economy may be divided into two main groups:

1. connected with the specific character of the socialist command-and-control economy and the pattern of economic development adopted in Poland;

2. resulting from the inability of a narrowly conceived environmental protection policy to oppose the ecologically negative influence of economic development.

In the first group of factors the most important are the following:

– autarkical development model, implying a low technological level and ecologically disadvantageous structure of primary and final energy consumption/use,

– industrialization pattern, based on the domination of heavy, raw materials and fuel-energy industries, leading to an ecologically disadvantageous structure of industrial output and productive assets,

– excessive (compared to the requirements of balanced economic growth) and accelerated capital formation, with a focus on the development of fuel-energy sector and metallurgy,

– strengthening, mostly ideologically determined, economic links within the countries of Council of Mutual Economic Assistance, based on the assumption of raw material/energy self sufficiency and supply-oriented development strategy of fuel-energy sector,

– domination of state-owned enterprises, underlying low ecological effectiveness of direct (legal-administrative) and economic regulation tools of environmental protection policy,

– excessive and frequently even wasteful exploitation of natural resources,

stimulated through the superiority of quantitative/physical tasks over financial ones in the appraisal of business entities by central economic and planning bodies,

- policy of low – in comparison to production/extraction and transmission/distribution costs and demand – prices of energy, raw materials and natural resources, leading directly to their excessive consumption and/or depletion and environmental degradation, and indirectly, to constant disequilibrium phenomena on relevant markets, as well as to a strain on the State's budget with subsidies to low prices of goods under consideration,

- rapid urbanization along with the tendency to locate or to develop towns or housing districts in close vicinity to big industrial complexes,

- soft money-budget-constraint vis-a-vis state-owned enterprises, causing their low sensitivity on cost/price signals, thus leading to high energy/raw materials and, as a consequence, pollution intensity of SOEs. (For an extensive analysis of all these factors underlying the deterioration of natural environment in Poland see Bates et al. 1994, and Fiedor et al. 1993.)

The most important single reason is the last one from the list, i.e. soft money-budget constraints of state-owned enterprises. It implies the empirically proven fact of a very high (approximately 2–4 times higher than OECD countries average) energy- and raw material-intensity of the Polish economy. This in turn mostly determines its high pollution- and resource-intensity.

Of key significance in the second category of natural environment degradation factors are the following:

- the lack of clearly formulated and relating to different time limits priorities of environmental protection policy,

- faults in different components of environmental protection management system, connected mainly with an insufficient range of decentralization and regionalization of the system,

- low effectiveness of the incentive function of economic instruments of environmental protection in the conditions of “shortage economy” and “soft money-budget constraint” vis-a-vis in state-owned enterprises,

- weak enforcement of standards and other instruments of direct regulation in the situation of institutional lack of ownership, legislative and regulating functions allotment.

As it seems, the “overlapping” mentioned above of the ownership function and legislative-regulating functions of the State was the most prominent reason for the low degree of implementation and enforcement of direct regulation instruments in the environmental protection policy in Poland.

Going beyond strictly economic and ecological policy related factors of environmental degradation in Poland under the conditions of command-and control economy, it is worth noticing here that the system of “real socialism”

did not contribute, in general, to the appearance of high ecological consciousness of citizens, including the employees and managers of state-owned enterprises. This can be considered an important constraint to the ecological recovery of the Polish economy during the transition toward a market economy due to a simple fact that a low ecological consciousness may result in a limited extent to which the requirements of natural environment protection are taken into account in the process of working out the development and privatization strategies of Polish enterprises. (For a detailed analysis of the factors underlying the actual level of ecological consciousness of the Polish society see: Frysztacki and Sodra-Gwizdz eds. 1995.)

If the system of centrally managed socialist economy proved economically inefficient and ineffective with respect to broadly conceived ecological objectives of modern economic development, then it is natural and logical to suppose that the transition to a market economy should bring also (beside economic) positive ecological effects. This belief, encountered both in press publications and – more seldom – in research and conference papers about ecological-economic issues, is founded chiefly on the fact that in the 1970s and 1980s most OECD countries achieved outstanding results in the sanitation of the natural environment or rationalization of natural resources consumption, especially of primary energy carriers. As usual, the economic-social reality is too complex to precisely reflect such a general idea. Common occurrence of the aforementioned market failures in the areas of environmental protection and exploitation of natural resources and assets, clearly implies the necessity of creating a properly addressed and consistent environmental protection policy. This is based on the implicit assumption that there is a political willingness to considerably remedy the natural environment, as well as a high level of ecological awareness both of producers and consumers. The latter is a primary condition enabling the state or municipal authorities the “transformation” of the need of clean environment into demand on it or, speaking more explicitly, the willingness to pay for different undertakings aimed at the rehabilitation of the natural environment.

This short reference to the social and institutional premises of ecological sanitation was not meant to suggest that there are no potential sources of improving the state of natural environment in Poland directly related to the economic system transformation. The potential sources that exist are connected with the quickly increasing application of methods of market regulation and co-ordination, especially with the privatization of state-owned enterprises. Respective to the aforementioned systemic factors of natural environment degradation, there can be indicated two most important market economy related potential sources of improvement of environmental quality:

- Reduction of energy- and raw material-intensity of economy, implied

by general improvement of microeconomic optimality, and the "hard money-budget constraint" in particular. In Polish conditions, the potentially positive ecological effects of this reduction are of key importance because of the extremely ecologically harmful structure of primary and end energy balance.

- Increase of economic efficiency and ecological effectiveness of different instruments of environmental protection policy.

Both these sources should be associated with the fact that commercialization and privatization (especially) of state-owned enterprises should increase their "price-cost sensitivity" through the introduction of the "hard money-budget constraint". This includes economically and ecologically beneficial effects of fuel, energy and raw materials price increases, as well as an increased economic (fiscal) burden related to generating ecologically negative influences onto the environment. However, it is important that these potentially beneficial ecological effects directly connected with market mechanism may not be treated unconditionally. Their actual occurrence depends on many factors, of which the most important ones are the following:

- consistent attitude of the government towards ecological law implementation and enforcement and the whole environmental protection policy as well,
- strengthening market oriented incentives of reducing energy- and raw materials-intensity through different instruments (information, research and development policy, preferences and tax allowances etc.) – of energy-industrial policy,
- harmonizing aims and instruments of ecological policy and privatization, energy-industrial and other important sectoral policies (especially agricultural and transport) of the State.

3. PRIVATIZATION AND ECOLOGICAL RECONSTRUCTION OF THE POLISH ECONOMY

3.1. Potential Positive Effects

The level of ecological fees and fines for emission of pollutants and waste disposal was radically raised during the past five years in Poland (approximately 10 times in real terms) which resulted in a substantial increase in the share of environmental protection costs in total production costs in many sectors and branches (see particularly Poskrobko 1991).

On the assumption that the privatization of state-owned enterprises radically improves their price-cost sensitivity and that there has already appeared in Poland a real demand constraint, the chances of transferring the rising costs of environmental protection into the final product prices are

reducing. Accordingly, a rising level of ecological fees and fines should become a more effective incentive to undertake preventive actions against emission. This can also include environmentally friendly changes in production technology, or modifications in the structure of the economy's final product.

The following instruments of indirect regulation proved to be of low motivating effect with reference to state-owned enterprises: tax allowances for environmental protection investment projects or other environmentally friendly actions, tax diversification, preferential loans, or other forms of indirect public subsidies to environmental protection actions and activities. Future spread (diffusion) of privatization related "least-cost" or profit oriented options in the strategy of enterprises should significantly boost their interest in these sources of financing preventive actions, thus contributing to the reduction of emission of different pollutants. It should also be noted that although the mentioned forms of financing ecologically friendly activities in private firms have been strongly criticized in Poland or in OECD countries, they proved beneficial for the achievement of environmental protection objectives of State policy in many countries — like Germany or Sweden.

Privatization of state-owned enterprises, or — in broader understanding — the growing participation of the private sector in the economy create also a very important doctrinal premise for the increase of economic efficiency and ecological effectiveness in the environmental protection policy. It implies separating the functions of the owner of basic production means and other economic resources from those consisting in creating (and following) ecological policy and environmental protection law. How effective this significant legal-institutional fact will prove depends on the restrictiveness and consistency of law enforcement by the State or regional governments. The greatest danger for natural environment sanitation lies in potential conflicts between the objective of keeping the employment level stable or growing — especially on a regional or local scale — and the need of cutting production or ecological lockout of plants which systematically violate environmental protection laws and regulations. In this context, more flexible (than currently used) methods and instruments should be taken into consideration, helping privatized firms, or these undergoing privatization, to approach emission standards and other regulatory parameters of environmental protection. An example may be shown here of solutions used in the environmental protection policy in the USA: the so-called escrow funds and performance bonds.

The aforementioned doctrinal (institutional) premise of the increase in ecological effectiveness and economic efficiency of environmental protection policy can and should be subject to some reservations. First and foremost, they are linked to the fact of the relatively slow pace at which the privatization of the largest state owned enterprises is proceeding. A lot of them belong to those

business entities which bring about considerable ecological losses and damages. These include many state-owned enterprises in the fuel-energy sector. A striking example here are some hard coal mines discharging huge amounts of saline waste water, thus contributing to the contamination of surface waters, and the Vistula River in particular. On the other hand, the environmental regulatory bodies tolerate for years the non-compliance with ecological law by the mines in question, including the non-payment of ecological fees and fines related to the discharge of saline waters.

The wide diffusion of least-cost operational strategies in Polish enterprises relative to the progress of their privatization, in connection with gradual demonopolization of our economy, may also bring about beneficial ecological effects through changes in sector and branch structure of the economy. Ecologically beneficial structural changes which may come as derivative of the price-allocation mechanism characteristic of market economy, can prove insufficient however for solving the complex problems of environmental protection in Poland. Poland should carry out an active energy and industrial policy, not only environment oriented, following the experiences of the countries of the European Union or other OECD members. Without such a policy, reducing the structural load of the environment through reduction of energy-, transport-, resource-intensity of social product comparable to that achieved by OECD countries in the 1970s and 1980s, and consequently a radical sanitation of the natural environment, will definitely be impossible. From the beginning of the 1970s till the middle of the 1980s, the countries concerned noted an approximately 30% increase of gross national product per capita, whereas the level of prime energy and different forms of end energy consumption hardly changed.

3.2. Potential Problems and Dangers

3.2.1. The Problem of Ecological Liability

Past experience (whose presentation would be unnecessary here) shows that there cannot be an efficient market economy without a dominating role of privately owned enterprises. However, the process of privatization has also a great impact on the natural environment in the short or the long run. The most important factor in the environmental protection policy is the question of the so-called ecological liability of firms in market economy. According to the "Polluter-Pays-Principle" (PPP), the liability means that a firm has to cover the financial effects and compensate losses resulting from proved and committed damage to the natural environment. Complex legal solutions give more

detail to regulations contained in civil codes, both in Poland and in OECD countries. In countries like the U.S.A. or Germany, where ecological liability of private firms is conceived extensively, there are special legal regulations which define the kinds and ranges of this liability.

The difference between:

- liability for current pollution,
- liability for past contamination,

is essential from the point of view of privatization.

The problem of liability for current pollution is not quite disputable. Its practical implementation (which I will shortly deal with later in the text) in different privatization procedures in Poland may raise certain doubts as to achieving certain objectives of environmental protection policy. A serious controversy is connected with the liability of newly founded private enterprises for past contamination, occurring mainly in the form of different wastes, contaminated soil or – more rarely – permanently contaminated surface waters. This controversy chiefly relates to the fact of the uncertainty in interpretation of legal regulations and uniform practice of law enforcement concerning past contamination. This, consequently, must weaken the interest of potential home and foreign investors in buying assets of enterprises going private. Foreign investors, especially those from countries of particularly broad scope of ecological liability, like the U.S.A., Germany or the Netherlands, are most exposed to potential and real negative effects of the situation. As it seems, the best solution for the problem of financing the clean-up of past contamination is covering the cost with public money. It may originate from general tax income of the State, or from the means of special ecological funds like the National Fund for Environmental Protection and Water Management. Such solutions seem both ethically proper and in accordance with the PPP. On the other hand, this principle should eliminate this form of financing, except in specific cases, the abatement of current pollution.

The problem of liability for past contamination is also related to the estimation of the privatized enterprise's value. This is particularly important in cases of negotiations with so-called strategic investors. Here, including environment sanitation cost in the price of the enterprise for sale appears to be an alternative to the public financing of the clean-up of past contamination. In such cases, carrying out detailed ecological audits is necessary, and also opening an appropriate deposit account in a Polish bank by the strategic investor (usually a foreign business entity). Money saved in this account would be used in future ecological rehabilitation and other purposes connected with the ecological restructuring of the firm, according to a time schedule agreed upon in a given privatization contract.

3.2.2. Transfer of Ecological Obligations in Different Privatization Procedures

In relation to the issue of ecological liability for past contamination, I mentioned the possibility of including the costs resulting from the transfer of ecological obligations in the price of business entity being subject to privatization. The necessity to secure the requirements of environmental protection in the process of ownership privatization resulted in introducing regulations about the transfer of ecological obligations to new owners into all procedures (paths) of privatization. The character of this elaboration does not account for presenting more detail of these regulations. Results of extensive research carried out by the Institute for Sustainable Development in Warsaw shows that generally, the applied privatization procedures bring about the following:

- transferring ecological liability on to economically weak firms created from remaining capital,
- no (very weak) stimulus to undertake ecologically friendly activities in the newly founded firms,
- difficulty in identifying the payer of fees and fines – liability for current pollution – in cases of complicated ownership transformations (Stodulski 1993).

Great dangers for securing the legal succession of ecological liability arise in cases of privatizing state-owned enterprises through liquidation. The peculiar “play for time” which often occurs between the founding organization and business entities taking part in the process of taking-over the liquidated enterprise’s capital often leads to the devastation of existing environmental protection equipment or to the generation of new pollution (especially solid wastes) effecting from the break in business (Jakubczyk and Szapiel 1994). The liquidation procedure also includes the case of “employees-buyout” which is in fact the most common privatization method in Poland. The potential ecological dangers inherent in this method are connected not only with a general capital scarcity the enterprises privatized this way are faced with, but also the low level of ecological consciousness of employees and managers referred to in section 2 of the paper. A considerable danger for the transfer of ecological obligations appears when a state-owned enterprise is liquidated because of its bad financial standing. Often the ecological liability is taken over by the State, as according to Polish solvency law the buyer of solvent enterprises is not responsible for their debts. A situation in which the law does not impose carrying out ecological audits before the process of a state-owned enterprise liquidation may only be considered alarming. Especially that in a group of enterprises privatized in this way, the majority has unsatisfactory ecological status, much more than is the case for enterprises undergoing capital privatization.

Furthermore, there are no uniform legal regulations concerning the obligation of carrying out ecological audits of enterprises included in the Program of Mass Privatization. As the Ministry of Environmental Protection, Natural Resources and Forestry estimates, over 200 enterprises included in the Program "make difficulties in environmental protection" (*Ecological...* 1995, pp. 92–93). The arising uncertainty may in future negatively influence the real process of privatizing these enterprises. Besides, it is an ethically doubtful situation, as it deprives great numbers of people trading stock exchange certificates for share of enterprises going private, of very important information, sometimes vital in the decision making process. It is a situation comparable to capital privatization through the public sale of shares, where it is not required to add information on the ecological standing of the firm in emission prospectus (so far very few firms have included this data in their prospectuses; these are Żywiec, Kable and Polifarb).

3.2.3. Ecological Dangers Connected with the Creation of Small and Medium-Sized Enterprises

The privatization process observed in Poland leads to creating a large number of small and medium-sized firms. It is mainly connected with the procedure of state-owned enterprise liquidation in order to change the owner. But above all, the quantitative expansion of small and medium-sized firms is connected with founding privatization.

Potential dangers for the natural environment that may arise may be divided into two groups:

- general weakness of the ecological monitoring system, especially in the current control of pollution emission levels,
- small range and low ecological effectiveness of emission permit system (for waste water discharge, emission of airborne pollutants and for disposal of solid wastes).

In spite of the fact that in the past few years some measures were taken in Poland to extend and modernize the national and regional-local networks of ecological monitoring, also with the use of international financial institutions or international assistance programs (i.e. PHARE), still the system's effectiveness is very low. Hence appeared the necessity of looking for new legal and organizational solutions which would also justify collecting ecological fees and fines from small and medium-sized emitters, according to the Pollutant-Pays-Principle. An example of such a solution is the introduction of the so-called lump fees for manufactories and small industrial plants, calculated on the basis of an analysis of the kind and quantity of energy carriers used, the technology of combustion, kinds and quantity of raw materials as well as the

technology of their processing. Another example is the introduction of voluntary ecological audits in return for certain credit preferences for funding the purchase of protective equipment or ecologically beneficial changes in the technology of production. As far as fuels and energy are concerned, a good solution would be the introduction of an ecological fuel tax, which would be commensurate to the overall ecological harmfulness of a given energy carrier. (Interesting statistical data about the problems of environmental protection in small and medium-sized firms are presented by J. Niodomagała in: Poskrobko ed. 1996, pp. 224–227).

4. FINAL REMARKS: PRIVATIZATION VS. SUSTAINABLE DEVELOPMENT

Privatization is by all means the most important component of the entire process of transformation from command-and-control to a market economy. Instead of conventional conclusions aimed at summarizing the main findings of the paper, in its last section I would like to concentrate on the attempt to answer a general and significant question: does privatization encourage transition to a stable and ecologically balanced development, or can it be perceived as a barrier to such development? In order to do that, I would like to look at the problem of privatization, or rather the economic dominance of private firms in the context of their influence upon the realization of constitutive principles of Sustainable Development, as they are conceived in theoretical literature, abundant written materials of numerous international organizations, and also in Polish ecological policy (as in the “Ecological State Policy” document).

The starting point of the analysis of relations between privatization processes and the category of Sustainable Development will be the enumeration of basic principles of Sustainable Development. Then I will shortly evaluate the possibility of identifying the influences of privatization – positive, negative or neutral – upon the realization of these principles in the process of economic development. Because of the limited size of the presented paper, it will naturally be only a first recognition of type and strength of interaction between the privatization process and ecologically stable and balanced development. Since I will refer in the analysis to earlier mentioned benefits and dangers which this process creates or may create for the natural environment, it can be considered a sort of summing-up of the entire paper.

Below a synthetic justification of evaluations from the table is presented:

Ad 1. Positive evaluation is connected mainly with the fact that privatization stimulates ecologically beneficial structural and technological changes in the economy.

Principle of Sustainable Development	Character of privatization influence		
	Positive (+)	Neutral (+/-)	Negative (-)
1. Abatement of pollution at the source	+		
2. Abiding the law	+		
3. Common good		+/-	
4. Use of economic and market instruments	+		
5. Polluter Pays Principle	+		
6. Regionalization		+/-	
7. Public participation		+/-	
8. Universality of environmental protection policy and environment integrity		+/-	
9. International co-operation		+/-	
10. Environmental precaution		+/-	

Source: own elaboration.

Ad 2. Majority of positive influences results from the institutional factor, i.e. from formal/legal separation of the State as the owner of productive assets and the body being responsible for creating and performing the environmental protection policy.

Ad 3. The principle of common good may be conceived as justice or equity principle: interregional, intergenerational, international. A special case here is ecological justice. Privatization as such is not a factor which may be evaluated definitely positively or negatively from this point of view. However, on the assumption that a broad range of inequity and poverty stimulates environmental pollution, to the extent that privatization reduces the range of inequity and poverty through an accelerating influence upon economic growth – it is possible to speak of the positive impact of privatization upon the realization of Sustainable Development in the context of the principle currently discussed. The perception by the private business community of the idea that the natural environment is a common good largely depends upon its awareness and psychological factors. Hence the resulting “self limiting” actions may be stimulated by actual economic advantages, like the “ecological” image of the firm being a stimulating factor for turnover and profits (ecological marketing).

Ad. 4. Privatization, along with deregulation and demonopolization, increases the efficiency of economic instruments in environmental protection – because of the increased significance of criteria of microeconomic optimality in the performance (management) of enterprises. This also influences an increase in efficiency of these instruments as factors aiding the direct control mechanisms.

Ad 5. This principle reflects (in the discussed field) the very idea of market economy based on private entrepreneurship. Widening the range of application of this principle, e.g. through the reduction of direct public subsidies in

environmental protection, goes along with privatization because the latter extends the scope of internalization of ecological externalities, i.e. taking into consideration the negative effects of business activity in microeconomic calculus.

Ad 6. It is difficult to say whether privatization has any tangible influence upon the realization of this principle. However, some influence may occur, both positive and negative, of regionalization of environmental protection policy on the scale of environmental protection activities in specific regions. (Principle of regionalization may be treated as a special case of the subsidiarity. Compare e.g.: *Trade...* 1994).

Ad 7. The principle is sometimes called "the principle of openness". The range of this openness does not result from the dynamics of the privatization processes, or from the already achieved degree of privatization of a given economy. A crucial role here is played by legal and institutional conditioning, securing the right to influence decision-making processes in private firms for the society as a whole and, especially, communities and local governments, if they have significant effects upon the natural environment. Similarly as in the case of common good principle, also in the case of public participation, an important role is played by public awareness and psychological factors, especially owners and boards of directors.

Ad 8. Each business activity, including these carried out in economy based on the private property and free market, may lead to crossing natural limits of regeneration abilities of ecosystems, to irreversible changes in biodiversity, and thus to violating environmental integrity. In this context, subjecting private firms to regulations based exclusively on the PPP and the principle of internalization of environmental costs is insufficient. Direct actions of the government are also necessary, especially those aimed at securing the inter-generational ecological equity as a very important component of common good principle.

Ad 9. Privatization, if combined with the liberalization of international trade, leads to greater openness, deepening and diversification of international economic relations. It does not imply though, a direct significant influence upon the methods and intensity of international co-operation in solving the interlinked problems of economic growth and environmental protection. It is clear that environmental regulations created by international communities (ecological agreements, protocols, conventions, etc.), as well as ecological provisions contained in global or regional trade agreement (GATT, WTO, European Union) seriously affect the conditions of international transactions carried out by Polish privatized (being subject to the privatization as well) and state-owned enterprises. (These interlinkages were particularly analysed in a comprehensive report prepared by a team led by the author of this paper:

Interlinkages Between Trade and Environment. A Case Study of Poland; Report for the United Nations Conference on Trade and Development. Trade and Environment Section, Geneva 1994).

Ad 10. In the case of this Sustainable Development principle it is not possible to speak of a direct influence of privatization processes upon its realization, either. On the contrary, a strong reverse relation can be noted. The uncertainty connected with the lack of the sufficient scientific recognition of complex environmental interactions encourages the use of a precaution principle and adaptive approach in solving different environmental problems. These uncertainties may in turn weaken the dynamics of the privatization processes, especially if they are connected with hypothetical very high costs of adaptation to the tightened or completely new environmental regulations.

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