THE COURSE AND EFFECTS OF THE TRANSFORMATION PROCESS IN POLAND
IN DIFFERENT FIELDS OF SOCIAL AND ECONOMIC LIFE

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TRANSACTION COSTS UNDER PLAN, MARKET, AND TRANSITION[1]

1. Introduction

The aim of this paper is to describe the different types and development of transaction costs (for a definition, see below) in formerly centrally planned economies (Soviet-Type Economies[2] – STEs). Western-Type Economies (WTEs, i.e. capitalist economies) have managed to lower marginal transaction costs, which has stimulated economic development. STEs, on the other hand, failed to adjust their institutions so that the phase of fast economic growth after the Second World War was followed by a declining speed of further economic development, ultimately leading to economic stagnation. Another question addressed is what were the consequences of the high transaction costs under the old system for the economic development in the transition period in Poland.

It will be argued that in an STE like Poland, with the USSR as power centre (stakeholder) and the communist party being the most important institution, transaction costs increased so much that reforms were inevitable at the beginning of the 1980s. However, as these reforms did not take place transaction costs increased even more during the 1980s, causing further economic stagnation, thereby making radical institutional

[1] I am indebted to Wytze van der Gaast, Remko Kampen, Henk Plasmeyer, Tammo Platje and David Ramsey for stimulating discussions and valuable comments on previous versions of parts of this article. Any remaining errors are my own.

[2] The terms Soviet-Type Economy, centrally planned economy, and what Kornai [1992] calls classical socialism are used interchangeably in this article.

change even more necessary.[3] In 1989 the economic system in Poland started to change from, roughly speaking, an STE into a WTE, which led to a reform of several existing STE-type institutions. Obviously, this institutional change reduced or even removed certain transaction costs related to the old system. In addition the transition process as such also resulted in new types of transaction costs.

An important question now is to what extent the transition process in Poland with its institutional change has created new transaction costs that could slow down economic activity. An additional question is to what extent incentives were created for people to undertake economic activity in the new situation. Existing state-owned enterprises were difficult to reform, and faced high market transaction costs. There were strong incentives for small business to develop due to the emergence of new markets and a lack of regulations. The reason for addressing these questions in this paper is that since 1993 the Polish economy has been growing again after about three years of strong economic decline. Whether the economy will be able to follow this path of growth (5-6% increase in GDP per year) depends to a large extent on the existence of an institutional environment which lowers transaction costs and creates incentives for economic activity and technical efficiency.

2. Planning transaction costs versus market transaction costs

Following Furubotn and Richter [1997], three different types of transaction costs can be distinguished: market transaction costs, managerial transaction costs, and political transaction costs. Transaction costs arise because there is no complete information and people are imperfect (they make mistakes and do not know everything). Barzel [1989, p. 2] defines transaction costs as "the costs associated with the transfer, capture, and protection of rights." According to Furubotn and Richter [1997, p. 43] "transaction costs embrace... the costs of establishing, maintaining, or changing a system's basic institutional framework."[4] Each of the three

[3] Although social and political factors in a strict sense are of great importance for explaining the collapse of the Soviet-Type Economy, the focus of this article is increasing transaction cost creating the conditions for institutional change.

[4] Institutions are "the rules of the game in a society, being constraints devised by human beings which shape human interactions." [North, 1990, p. 3] Institutions can be divided in formal (e.g. the system of property rights, laws, government regulations) and informal institutions (e.g. conventions, norms of behaviour, and culture – in other words, unwritten rules of the game).

types of transaction costs distinguished by these authors can be subdivided into 'fixed' and 'variable' transaction costs. 'Fixed' transaction costs are "the specific investments made in setting up institutional arrangements"[5] and 'variable' transaction costs are the costs "that depend on the number or volume of transactions." For the purpose of this paper, the focus will be on market and managerial transaction costs.

Market transaction costs are related to using the market, and like any type of transaction costs consist of search, negotiation, and control costs. Search cost are basically the costs of obtaining information. Examples are: searching for buyers and sellers, information about their behaviour, laws and regulations, what is written in a contract and what is meant by it, etc. Negotiation costs are the costs connected with concluding a contract. If, for example, a representative of a firm wants to conclude a contract with another firm, he has to negotiate with this other firm as well as with the responsible people within his own firm. Besides, the necessary bureaucracy and paperwork are also included in these costs. Finally, control costs concern monitoring and enforcing the fulfilment of the contract. When, for example, a firm sells some goods and ships them with a transport company, there are costs connected with checking whether the transport company does its job properly, whether they pay, checking if there are damages due to non-fulfilment of the contract, the compensation of those damages, etc. Institutions that can lower those transaction costs are, for example, consultants, a developed market structure with self-enforcing rules, a developed legal system, and so on.

Furubotn and Richter [1997, p. 46] define 'fixed' managerial transaction costs as costs connected with the "creation, use and change of an organization" and 'variable' managerial transaction costs as the costs of managing, information processing, communication and supervision in a company. In other words, the 'variable' transaction costs concern the costs of "running an organization" which can be divided into (i) information costs and (ii) what Williamson [1985, p. 1] calls "costs associated with the physical transfer of goods and services across a separable interface."

With respect to a centrally planned economy, the main costs of planning are information costs which concern the costs of decision-making (collecting and processing information, plan bargaining, etc.), the control costs of monitoring the execution of orders, agency costs, the costs of in-

[5]The institutional environment provides the basic rules of the game in a society consisting of formal and informal rules. This institutional environment constrains government and market actors to make public and private institutional arrangements (e.g. contracts, firms, labour unions) – organisation forms within which transactions are co-ordinated and executed [Groenewegen et. al., 1997, p. 57].

formation management, etc. The STE can be considered as one big company, although there are some significant differences in the institutional environment and the incentive structure as compared with a large capitalist company. Although both use bureaucratic co-ordination to solve the allocation problem – as opposed to market co-ordination – in a capitalist firm the owner (owners) can be pointed out, to whom managers are responsible and whose earnings are directly influenced by the manager's behaviour, while the company operates within a more or less competitive market environment. In a socialist bureaucracy there is no direct owner whose earnings are influenced directly by the manager's behaviour, while each bureaucratic "head has another head over him or her." The motivation of the ultimate leader for decision-making are political rather than monetary [Kornai, 1992, p. 124], while the existence of a market is more and more limited in the process of "perfecting" the socialist planned economy.

The transaction costs in an STE are strongly connected with the process of *direct bureaucratic control* of the economy. "This embraces the elaboration of plans with the force of commands and the administrative compulsion to implement them, the management based on the commands, and the practice of superior organization intervening regularly in every detail of the production and allocation process and day-to-day running of the subordinate organization." [Kornai, 1992, p. 117] Pejovich [1995, p. 146] argues that the lack of market signals (i.e. indicators of real scarcity, like market price) makes the transaction costs of resource allocation higher in a planned economy than in a market economy.[6] Here transaction costs concern the process of decision-making about who should do what, the plan preparation, and the control of the correctness of information provided by the subordinates in the hierarchy. Those subordinates have an interest in maintaining and enhancing the control costs connected with the monitoring of their performance, an argument that supports the statement that the transaction costs of plan-bargaining increased through time (discussed in Section 4). Transaction costs specific for an STE are the resources needed for enforcing the plan, preparing the plan, maintaining and protecting the rules of the game (e.g. armed forces, security forces), and the control costs of preventing

[6] In a market economy transaction costs are spread among the population. In case of decreasing economies of scale concerning transaction costs, there is a limit on the amount of transactions an organisation can do without increasing the marginal transaction costs too much. This means that, other things equal, the higher marginal transaction costs for the planner, the lower amount of transactions compared with a more de-centralised system of economic organisation.

managers of firms and agents lower in the hierarchy (subordinates) to falsify information for their superiors.

In the STE market transaction costs were very low for firms due to the existence of shortages. Almost whatever was produced, there was a demand for it. This, on the other hand, led to high transaction costs for consumers who had to queue.[7] Shortages also created an informal (black) market which was connected with high transaction costs (especially search costs). Opposed to the so-called shortage economy where demand is not constrained by the budget of consumers and producers but by supply, the WTEs are rather demand-constrained economies where the budgets of the consumers and producers determine how many goods are allocated. In the WTE suppliers have to compete for customers causing search costs for them. Another example of the influence of different institutional environment on transaction costs is the struggle for customers which causes institutional arrangements like providing credits and loans to come into existence. In the 1970s in Poland some goods like cars were delivered on a pre-payment base. This lowers the possibility for post-contractual opportunistic behaviour[8] (e.g. cheating by not paying). The system of selling with payments afterwards increases the amount of transactions, but also increases the possibilities for opportunistic behaviour, which leads to an increase in transaction costs (control costs). Total transaction costs can increase, but marginal and average transaction costs per unit of product sold can decrease when, for example, opportunistic behaviour only appears on a small scale. The height of the marginal transaction costs (and the influence on economic activity) depends on the extent to which there are institutions that lower incentives for opportunistic behaviour and facilitate the enforcement of contracts.

3. Transaction Costs and Economic Development

Douglas North [1990, 1993] (following Adam Smith) considers an efficient solution of the co-ordination problem (the way in which in a society

[7] In a survey among 418 Poles older than 15 years carried out by the author at the beginning of 1999, the people who mentioned to have queued before 1989 (about 95% of the sample) reported to have queued more than 7 hours on average per week (men on average about 6 hours, women about 8 hours).

[8] "Moral hazard is a problem of *'postcontractual opportunism'*, in that the presence of some unobservable (unverifiable) action provides people with an opportunity to cheat after the deal is signed." It is the existence of private information that creates possibilities for opportunistic behaviour. [Molho, 1997, p. 8].

wishes are reconciled with scarce resources) as the most important factor of growth of welfare. The process can be described as follows.

- In the long run the advantage of further division of labour, gains from trade, and technical innovation leads to increasing returns to scale.
- When the scale of production increases (as well as the scope of the market[9]) the amount of complex transactions also increases, leading to increasing transaction costs and bigger individual uncertainty.
- When production is organised in a technically efficient way a large part of the wealth-maximising behaviour is used for improvement of the production techniques and minimisation of transaction costs.[10]

Pejovich [1995, pp. 88-90], using the example of the transaction sector, gives three major reasons why transaction costs in a growing economy increase: 1. the replacement of personal exchange (repeated dealings) by impersonal exchange, 2. capital intensive production techniques stimulate growth in size of firms, leading to increasing managerial transaction costs, and 3. gains from trade can lead to conflicting interpretations about the rules of the game, the institutional arrangement, and the distribution of income leading to increased spending on "defining and enforcing the rules of the game." [Pejovich, 1995, p. 90].

The first reason concerns the changes connected with economic growth that goes together with an expanding market. Suppose that in a traditional society people only trade with other people they have known for a long time. In that case the costs of searching clients are quite low, and so are control costs. In case of repeated transactions in a traditional society, the consequences of cheating (post-contractual opportunistic behaviour) can be quite big, e.g. the cost of not paying can be being an outcast for the rest of your life (losing your good name). With an expanding market due to division of labour and gains from trade this repeated trading is replaced by impersonal exchange – the more the market expands, the longer the chain of unknown exchange partners.

The increase in the working of such an expanding market's *invisible hand* is not a free ride. Search costs increase (searching clients and new markets), as well as negotiation costs (information about reliability of a client, etc.) and control costs (if you do not know someone it is more difficult to foresee if he, for example, does not cheat; also for the contract partner the incentive to cheat is greater when he does not know you and the ex-

[9] In the STE the task of the planner would increase. When the planner cannot solve the co-ordination problem efficiently, the size of the 'informal market' is likely to increase.

[10] In the STE a large part of the wealth-maximising behaviour of consumers was used for arranging consumption goods, while producers were busy with bargaining for lower plan targets and more inputs for assuring an 'easy life'.

change is not going to be repeated). Institutional mechanisms are important for reducing market transaction costs. A market, for example, reduces the costs of searching clients, a reputation reduces control costs, an efficient legal system reduces enforcement costs (when that procedure is too expensive, this leads to fewer transactions, however 'informal enforcement arrangements' can be cheaper and more efficient, but morally objectionable).

The importance of transaction costs in economic growth can be described in a simple scheme: institutional framework facilitating economic growth → economic growth → more transactions → initially higher (marginal) transaction costs → the existing institutional environment and arrangements are only fit to deal with a certain amount of transactions → institutional change needed to lower (marginal) transaction costs in order to facilitate trade and economic growth. However, institutional change is costly and is very often not in the interest of all parties in the economy.[11]

Put differently, following North, a two-sided problem can be distinguished:

1. The problem of a technically efficient set-up of the production (static and dynamic efficiency): this directs the searching behaviour of individuals in such a way that they really aim for technical efficiency.
2. The problem of a socially efficient set-up of the production: when transaction costs decrease, technical economies of scale are obtainable.

The idea is that the social organisation is set up in such a way, that static and dynamic efficiency are achieved approximately. Of course there will be space for strategic or opportunistic behaviour. Main point is not the transaction costs, but the cost of loss of technical efficiency. North [1993, p. 359] argues that when economic actors aim for technical efficiency, even when they have initially wrong models they will change this due to competition of the market.

Another question is what incentives under different market structures exist to lower transaction costs. The more competition, the stronger the incentives to lower transaction costs. In a shortage economy the customers will come anyway, while the market transaction costs for the firms/planner are low. Here is a low incentive to lower the transaction costs of allocation. For a firm under market competition there is an incentive to

[11] Inefficient institutions can keep on existing because, for example, powerful groups obtain privileges and property rights that hamper economic growth [Groenewegen et. al., 1997, p. 67]. An example of this is the Communist Party and the institution of state-property in STEs. These two institutions were the fundaments of the classical socialist system with a high ideological value which was a reason to keep them (as well as because of self-interest of the nomenklatura), although they became a brake on economic growth.

reduce costs, also because the gains are felt directly. In other words, which institutional environment reduces transaction costs? Theoretically it is possible (practically more difficult) to imagine an organisation where everyone aims at improving technical efficiency, but where the advantages immediately leak away in transaction costs.[12] In other words, striving for lowering transaction costs can lead to a design of efficient institutions, while high transaction costs can cause inefficient organisations for concluding transactions [Groenewegen, et. al., 1997, p. 67].

4. Transaction Costs of Planning

4.1. Problems of planning: incentives, plan-bargaining and information

Increasing transaction costs and low adaptive efficiency in the STE first will be discussed with help of problems that Kornai [1992, pp. 117-8, 122-4, and 126-9] points out with respect to the centrally planned economy. He argues that the direct bureaucratic control (planning) of an economy is viable in the sense that it solves the allocation problem (what, how, and for whom to produce) in many important fields. However, the adaptive efficiency (i.e. institutions able to adapt to changes through time, and institutions giving incentives for gaining knowledge, introducing innovations, and solving problems and bottlenecks in society through time [see North, 1990, p. 80]) is very low. The system adapts very slowly to technological change, while technological development is slow due to a lack of incentives for initiative, entrepreneurship, and innovation. In the former centrally planned economies technological change was rather exogenous (planned), while the mentioned disincentives for individuals and firms and high transaction costs of adapting the plan to the introduction of new technologies were huge barriers for endogenous technological development. Part of adaptive effi-

[12] However, it can be argued that this was more or less the case with slavery. Suppose the owners of the slaves aim at technical efficiency, and distract value by paying the slave only a fraction of his marginal product (in order to survive). The slave has a lower incentive to produce efficiently than when he would earn the entire marginal product. The relative advantage of slavery is reduced due to the existence of transaction costs, mainly due to different agency problems and specific problems connected with slavery. This concerns costs of controlling consumption behaviour that collides with productivity aims (e.g. alcoholism), costs of controlling if a slave is really ill and that he does not injure himself on purpose, costs of preventing damaging productive assets on purpose, and control costs connected with preventing uprising. Although pain incentives may increase the productivity of slave labour, control costs can wipe out any of these productive gains. [Eggerstsson, 1990, pp. 204-5, and 208-9]

ciency is learning from mistakes [North, 1990, p. 81], which was a very weak point of the STE. The main problem of the STE was in the incentive structure, conflicts in interests between different strata of the economy, and a huge information problem (distortions in collection and utilisation).

- There was a high risk of taking initiative, being creative, and criticising upwards within the bureaucracy, implying high transaction costs of correcting mistakes, improving distorted information, etc. "The character-forming and training effect, and the selection criteria of bureaucratic control, reinforce each other: servility and a heads--down mentality prevail."[13]
- High and increasing negotiation costs in the *vertical bargaining* process.[14] Although there were more players, for simplicity it is assumed that there is a branch minister, a branch director, and a manager of a state owned enterprise. The minister provides the branch director with the annual plan, and the branch manager dis-aggregates it for firms (concerning production, material allocation, and manpower). This is a classical example of a problem with asymmetric information (as explained in the general 'principal-agent framework'), where the person on the lowest level possesses most of the information, giving incentives for opportunistic behaviour. The information problem lies in the firm's production capacities and its production function. An easy life is in the interest of the manager, giving him an interest in easy production plans and the availability of as much materials and labour as possible. This is a case of moral hazard where the manager distorts information by reporting less capacity and the need of more materials and labour than is the case in reality. It pays off to bargain for a looser plan than proposed by the branch director. The drafter of the plan has two lines of defence: draft a plan more ambitious than in 'normal' cases and 'plan in' the level of input and output achieved the year before ('ratchet effect'). This gives the manager an extra incentive to withhold performance and exactly achieve the plan (under-achievement would be punished). The branch director, interested in higher production and less use of materials of the state-owned enter-

[13] An implication for the transition period of this informal institution that developed during socialism is that entrepreneurship as a mentality/culture is something that has to be developed. The formal rules change much faster than informal rules, however how fast a culture of initiative and self-responsibility is created depends on the incentives given by the changing formal rules and how strong ideology/culture enhances or hampers such a development.

[14] In a market economy bargaining between suppliers and demanders takes place on a horizontal level. In hierarchies bargaining takes place on a vertical level.

prise, faces a similar role as the manager when bargaining with the ministry. It is in his interest to keep some 'capacity reserve' and bargain for a looser plan. This makes the bargaining position of the branch director with the manager weaker, because the manager is his 'natural partner' when dealing with the highest level of the bureaucracy. The consequence is that the stream of information from the bottom to the top is methodically distorted. This means that when the bargaining process in an STE took definite shape, planners had to deal with distorted information, and as a consequence they had more and more to guess. Plans based on estimates rather than reliable information are more likely to cause distortions. The moment there are more products to be planned and the bargaining chain becomes longer, other things equal, the chance of distortion also becomes bigger. Improvisation rather that planning is likely to become practice.

- The major objective of the leading institute of an STE, the Communist Party, was rapid economic growth with an emphasise on quantity. This had a negative effect on the product quality and product range. The rather politically motivated "quantity drive" led to *inner insecurity* in leaders (e.g. managers, branch directors) due to a conflict of motives: on the one hand the political task of a leader was to raise output, while on the other he had an interest in underreporting actual output (see plan bargaining) and an increase in costs or a fall in quality could get him into trouble one or the other day. Furthermore, the "politicization" of the economic management process (rather than making decisions based on economic or technical arguments) often contributed "to a distortion of information over and above the distortions" [North, 1990, p. 127] described above.
- The planning process itself leads to a huge information problem, which increases when the amount of transactions to be planned increases. The assembling and processing of the incredible amount of information and the co-ordination decisions based on this information are too difficult a task for one central body. The low level of computerisation of STEs led to a bigger problem of dealing with the information. While the development of information technology was slower than in WTEs, STEs needed it more for information processing and solving the allocation problem. The mathematical problems had to be solved by trial-and-error, while there was a lack of time for working out the plan. This trial-and-error process and lack of time led to a plan full of inconsistencies, which revealed themselves during implementation. Modifying the plan was a cumbersome process, because a change in one part caused a change in other parts. Furthermore, the difficulties with changing the plan also delayed the introduction of innovation,

making the system rigid and adaptively inefficient. Simplification of the task is a way to circumvent the huge transaction costs of full planning by emphasising, for example, main tasks in order of importance. But this can leave holes in the plan, distorting resource allocation and giving incentives for opportunistic behaviour. The bureaucracy rather did not like this, and could introduce new regulations (rather than fixing the holes). Calls for simpler planning were counteracted by the tendency to be "complete, comprehensive, and watertight" [North, 1990, p. 129], leading to a further increase in bureaucracy. To sum up, an increasing amount of transactions called for more planning variables to be determined, which, when simpler methods were applied, left more loopholes. The tendency of the bureaucracy to control everything led to its growth, which went together with managerial diseconomies of scale.

4.2. Problems of planning: moral hazard, knowledge and narrow interest

As discussed in Section 3, North connected the technical and social set-up of production in a vision on the cause of the wealth of nations. Some countries can have relatively low transaction costs, but a lack of incentives for dynamical efficiency (e.g. in the case of state monopolies). Other countries can have strong incentives for technical efficiency, but face high transaction costs (e.g. the "Asian way"). The question of technical feasibility of planning is not the main problem, although it involves diseconomies of scale. More important problems concern moral hazard and knowledge. Furthermore, the shift from 'encompassing interest' to 'narrow interest' is important for explaining why the STE with its inherent problems experienced a period of fast economic growth.

As discussed above, a problem is that the system of central planning as in the STE is a system of directives creating moral hazard problems. It is impossible to give perfect directives, therefore individuals basically can do what they want. The idea is simple: a command or contract can never be complete (due to high transaction costs connected with "the presence of private information and/or unobservability of behaviour" [Molho, 1997, p. 12]), and the more it is aimed at completeness, the more the possibilities for control decrease, raising the possibilities for opportunistic behaviour leading to high transaction costs that cause efficiency losses.[15] Even in the theoretical case of non-existence of private information and the

[15] A good example is a tax declaration form. The more items that have to be reported, the more difficult (costly) it is to control the truth of the reported items.

observability of all behaviour (no opportunistic behaviour) transaction costs still exists due to, for example, the complexity of the co-ordination problem and human fallibility (e.g. if there is a possibility of making a mistake, it can be necessary to control). However, in this case the co-ordination problem becomes rather a technical matter and the transaction costs are much lower than in case of opportunistic behaviour.

Increasing costs of transaction connected with the organisation of a centrally planned economy are connected with the Leninist principle 'trust is good, control is better'. In the situation at the beginning of this century in Russia, where the communist party operated underground, this principle was understandable. In the long term, however, this principle is disastrous for an organisation. It can be said that Stalin carried this principle through into the extreme. The moment that controlling the fellow human being becomes an important element of the economic system (or organisation), control costs increase (monitoring, enforcement), and the incentive to manipulate information from below becomes bigger, which causes the information costs for the planner to increase. On the other hand, information provision and processing was in fact monopolised by the planner. As a consequence, also on the lower levels more often decisions will be taken based on wrong/incomplete/manipulated information. *Competition in the field of provision and distribution of information* (freedom of speech, etc.) can lead to 'better information'. More trust leads to a smaller necessity of control (complete control is impossible due to high control costs). Because of technological development (cameras, telecommunication, etc.) control becomes relatively easier (for example by phoning someone and checking where he/she is or what someone else is doing), but this can lead to a larger extent of opportunistic behaviour. In other words, the moment that the government loses the trust of the population, it will be more difficult to implement a policy because the lower levels have incentives to manipulate information and to show opportunistic behaviour.

Another problem of central planning is based on an idea of Hayek.[16] Even if the planner knows all production techniques (which is not very likely), still it is impossible for him to estimate the preferences of individuals. Hayek's point is that it is not the information problem (the difficulty of the planner to obtain the relevant information) but the knowledge problem that is crucial. This is connected with the fact that in order to increase their welfare individuals have to appropriate it privately. Preferences of individuals only take a definite shape when they start

[16] This argument is based on Kornai's [1992, pp. 129 and 476] discussion of Friedrich Hayek's (ed.) *Collectivist Economic Planning* (London: Routledge and Kegan Paul, 1935).

searching a product. To make the idea intuitively clear: would you be interested in all the details of a car that you cannot afford yourself? Probably not. Only by the time you have the money available you start looking what types of cars there are, and you might not like the car produced according to the plan. Hayek's knowledge problem is at least double-sided. The planner needs to have the knowledge which consumers of those products often do not have themselves. The planner cannot look into the future, so he cannot start with product innovations. The only solution for this is according to Hayek trial-and-error, something a planner cannot do, but a market can.

Using an argument from Olson [1992, p. 56], it can be said that in the USSR the transaction costs increased after the death of Stalin. He argues that Stalin as a 'dictator' and de facto the owner of the USSR had a 'encompassing interest' which furthered economic growth. After his death there was a shift from 'encompassing interest' to 'narrow interest',[17] leading to higher transaction costs. The power that in the beginning was largely in the hands of the 'dictator' "was diffused throughout a "new class" of *apparatchiks* (bureaucracy), and sometimes even to groups of workers in individual establishments." [Olson, 1992, p. 58] This led to an increasing principal-agent problem and an increased struggle for the distribution of welfare which caused the bureaucracy to spend more effort on this, rather than on producing efficiently. This argument can also be used for Poland until Bierut's death in 1956,[18] although it is much less strong. In other words, when the classical socialist system was established, there had already been a transformation towards narrow interest.

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[17] "If an individual, or an organisation with enough coherence and discipline to act with rational self-interest, obtains a substantial proportion of any increase in the output of a society and bears a large proportion of any drop in this social output, then this individual or organisation has an encompassing interest in that society. This encompassing interest gives the actor in question an incentive to care about the productivity of the society and to attempt to increase it. In other words, the encompassing actor's interests are not only served by obtaining a larger share of the social output, but also by increasing the output of the society. By contrast, an individual or organisation with a "narrow" interest – one that receives only a miniscule share of any decrease of the society's output – will have no incentive to try to increase social output. That individual or organisation has only an incentive to strive to obtain a larger share of the society's output through distributional struggle, even if this distributional struggle reduces the national income by much more than the narrow interest obtains." [Olson, 1992, pp. 55-6]

[18] "Despite the affection of monolithic solidarity, the Polish communist movement differed from the Soviets on many essential issues, and was deeply divided within itself... In the end, when Stalin was left ruling Poland through his reserve team of faceless puppets, it was as much a failure for him, as for the Polish communists themselves." [Davies, 1981, p. 576]

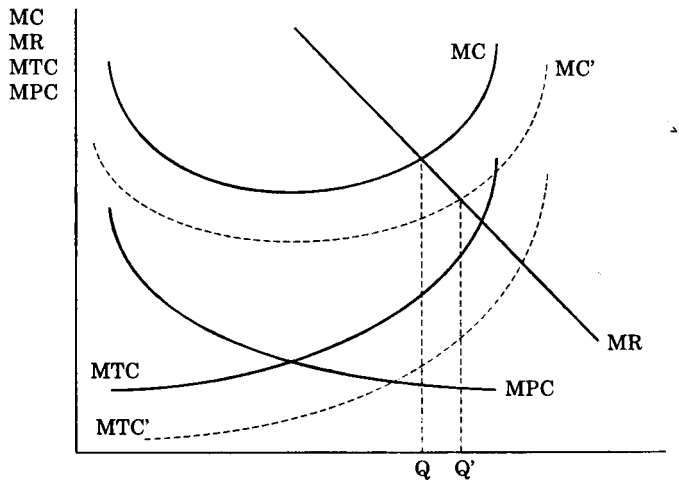
5. Transaction costs in STEs and WTEs: a comparison

In this section it is attempted to compare transaction costs in STEs and WTEs. Although the market mechanism fails on several points (which is an argument for the case of planning), one of its strengths is the price mechanism that lowers transaction costs. The diagram below illustrates the increasing transaction costs in a growing economy and the typically higher transaction costs in an STE (due to the inherent inflexibility and adaptive inefficiency) compared to a WTE.[19] The MPC (marginal production costs) curve has a negative slope due to increasing economies of scale. The MTC (marginal transaction costs) curve has a positive slope because with increasing production more complex transactions take place leading to diseconomies of scale.[20] First the MC (marginal costs = MPC + MTC) curve shows a declining trend. However, at a certain moment exchange becomes too complex, and the increasing returns to scale are more than compensated by the increasing transaction costs. While the economy was growing, institutional change took place in WTEs, causing the MTC to shift to the right to MTC' and MC to shift downwards to MC'. As a consequence the output increased from Q to Q'. STEs did not show such an adaptive efficiency, causing the marginal transaction costs to increase which resulted in lower output and fewer possibilities to take advantage of economies of scale in the production process compared with WTEs.

Neal and Barbezat [1998, p. 56] argue that "the primary factor in the growth of European production and trade has been technological progress, which has created new goods not even imagined in 1958, reduced the cost of producing other goods that were available in the United States but not yet in Europe, and reduced the business transaction costs,

[19] Transaction costs are partially measurable [see Wallis and North, 1986] because they go through markets and partly difficult to measure. Time spent on queuing and the annoyance going together with this in Poland before 1990 can be indicated, but measurement remains very imprecise. For example, of 396 Poles who reported to have queued before 1989, 61.1% assessed it as being very annoying, 28.8% as annoying, while only 1 person reported it to be pleasant and 1 assessed it as being very pleasant. [Platje, 2000]

[20] It is argued here that transaction costs show decreasing economies to scale. However, it can also be argued that there are first economies of scale, and after a certain moment diseconomies of scale set in. In other words, institutions can be suitable for a certain production- and allocation structure. However, on a certain moment a limit is reached where the rules of the game that first stimulated the making of transactions now hamper the process. This can be legal rules that do not take into account new technological developments, institutional arrangements that do not suit the new developments, and so on. There comes more friction in the system, making institutional change necessary. If this does not happen, transaction costs can become that high that economic stagnation will take place.



including the shipping charges, and costs of inventory control and marketing." Economic integration and an increase in international trade were important factors stimulating economies of scale due to specialisation and the spread of innovations through WTEs. So while due to the integration process in Europe the (marginal) market transaction costs declined (shift to right), in STEs planning transaction costs increased due to 'failed' reforms, an increased planning problem, and an increased principal-agent problem. Although there were economies of scale in STEs, innovation, integration, specialisation (trade), etc. stayed behind.

In the beginning the institutions of the STE were effective for fast development of the productive forces, and because the scale of production did not cause many complexities, increasing economies of scale could be obtained.[21] The institutional structure and the property rights order brought the 'structural production possibility frontier' (the set of possible organisations that shape the structure of property rights to minimise costs and maximise output) close to the 'technical production possibility frontier' (the stock of knowledge and endowments that determine the upper limits of productivity and output) and caused the last one to expand.

[21] Planning can be quite effective to generate investment and fast growth in key sectors (e.g. heavy industry) that are the basis of further economic development. For example in Western Europe just after World War II, where the market had a bad name and market institutions were not well developed, government planning and intervention had a large impact. "There was no functioning private sector to which to turn in order to mobilize the investment, capital goods, and skills necessary for reconstruction and recovery; international trade and payments had been disrupted. Governments would have to fill the vacuum and take charge. They would be the organizers and champions of recovery. There was nothing else." [Yergin and Stanislaw, 1998, p. 21].

However, a consequence of the increasing scale of production and more advanced technology was that exchange became more complex. The transaction costs of using the technology increased. The 'technological gap' to the Western market economies became bigger. Western market economies innovated in a technological sense, which went together with institutional change of which the distribution sector is a good example. In other words, the institutional environment in WTEs stimulated technological development, making institutional change necessary. Technological change took place to a lesser extent in STEs, and necessary institutional change happened in the form of reforms. However, system inherent factors hampered reforms (according to, among others, Lavigne [1999] the power monopoly of the communist party was the most important obstacle), which resulted in increasing transaction costs.[22] A consequence of the shortage economy was the growth of the parallel economy, which undermined the effectiveness of planning and caused the transaction costs in the distribution sector to increase.[23] The institutional environment was market-unfriendly. Although the USSR did a lot in, for example, the military field, there were huge barriers for applying new technology in the consumption sector.

Changing the rules of the game (with the structure of property rights as the most important one) was necessary to let the 'structural production possibility frontier' and the 'technical production possibility frontier' expand simultaneously and to lower transaction costs. The co-ordination problem of equilibrating demand and supply increased. In Poland, shortages intensified at the end of the 1970s, becoming a bigger problem in the 1980s, being very intensive in 1981, and staying at least until 1987 far above the level of the 1970s. [Hockuba, 1995, p. 30] This influenced

[22] Pejovich [1995] argues that the planner in fact has an interest in keeping shortages. If the shortages would disappear, and the co-ordination mechanism would work without many problems, the planner loses its distribution function (the distribution function gives him economic power). An implication for transformation is that the bureaucrat (planner) loses economic power, and in order to facilitate institutional change the bureaucrat can be given an interest in the new system, which could have happened under the old system when many of them already took care of starting their own business.

[23] Paradoxically, the informal economy was on the one hand a 'lubricant' of the planned economy, stepping in where there were planning failures, while, on the other hand, it undermined the system of central planning. Although the institutional environment was hostile with respect to markets (in most of the cases markets were illegal) and there was a lack of institutions that facilitated market transactions (no legal system to enforce market contracts), trade existed because of substantial gains from trade and the fact that some forms of trade, in particular trade "that can be consumed on the spot", were self-enforcing because the interest of the parties involved was big enough to let transactions take place, despite high transaction costs. [Olson, 1992, p. 62].

the incentive structure negatively: too little innovation (due to the structure of property rights), declining labour morale, and increasing control costs (army, police, the bureaucratic apparatus). In reality, institutional change was only possible within the constraints of the power monopoly of the communist party, the influence of the Soviet Union, and the limited possibilities to change for example the property rights order (e.g. on ideological grounds).[24]

Following Eggertsson [1990], an STE like Poland in the 1960s still had resources for extensive growth[25] (many natural resources were available in the USSR), in 1970s the problems were attempted to be solved via import-led growth based on importing Western technology and in the case of Poland acquiring Western credits and loans. The internal problems in the Polish STE had accumulated so much by the end of the 1970s, that reform was necessary. Important reasons for this were economic problems caused to a large extent by high transaction costs and public dissatisfaction due to economic and non-economic reasons. The recession at the end of the 1970s was to a certain extent the result of the huge foreign debts and the fact that, for example, production under licence of foreign companies did not lead to extra export of the goods produced (while costs were made). The agreement with Fiat to produce under licence led only in a later stage to the production of cars that could be exported, but by that time the model was already out of fashion in the West. High transaction costs can be an answer to the question why there was such a long interval of time between the acquirement of the licence and the factual production.

Reforms in the 1980s changed the system on the surface, but the problems still existed [Balcerowicz, 1997]. De facto planning was largely replaced by state purchases, but many features remained (lack of competition between suppliers, plan bargaining, shortages, etc.). Poland left the path of central planning without introducing a market mechanism [Balcerowicz, 1997, p. 350], which created the pre-conditions for falling apart of the system. In a situation of reforming a centrally planned econ-

[24] Eggertsson [1990, p. 61] argues that the communist party was conscious of the fact that a change in the structure of property rights would lead to an increase in the net output, but the 'agency problem' was a hampering factor. Most of the reform proposals considered decentralisation of economic power, which means more power for agents of the state. There was a fear for increasing 'agency costs' (control costs of monitoring agents) and a loss of control. Because of the self-interest of the ruling elite the inefficient system of property rights stayed and a more advanced system of rules was not introduced. High transaction costs caused failure of output-increasing reforms.

[25] Extensive growth means increasing output by using more inputs, while intensive growth means increasing output by a more efficient use of inputs.

omy without introducing a market mechanism (private enterprise was allowed, but there were many mechanisms giving disincentives to undertake economic activities), where no clear new co-ordination mechanisms come into place while many old mechanisms keep on existing, transaction costs rather increase. Martial law from 13 December 1981 increased the dissatisfaction among the population, while many people left the Communist Party,[26] a sign that at least the lower cadres did not believe so much anymore in the case of the centrally planned economy. Public support and belief in the case of socialism created 'internal incentives'. When this acceptation/ideology withered away, 'external incentives' had to be given by reshaping the institutions increasing the transaction costs. Furthermore, the use of rules of the game is a "knowledge-creating process". [Pejovich, 1995, p. 91] This means that when a system establishes itself, people find holes and weaknesses in the system, and make use of this knowledge. This "institutionalisation of opportunistic behaviour" became a bigger problem when the belief in the system (by the leaders and the common civilians) withered away due to reasons mentioned above and the example of WTEs showing a better performance than STEs.

So due to growth of the economy the amount of transactions increased, making the co-ordination problem bigger (increasing transaction costs). Institutional change was necessary for lowering transaction costs, but due to the low adaptive efficiency this did not happen. Although the system was able to survive for some time, the increased transaction costs added up to other contradictions within the system (e.g. social and political factors), creating the basis for a revolutionary change (a change in the qualitative features of the system).

To conclude this section, Kornai [1992, p. 377] argues that the socialist system was not capable "of a renewal that could free its dysfunctional features while retaining the sole rule of the Communist Party and the dominance of the state sector."[27] The internal strength of the system

[26] The membership of the Polish United Workers Party (PZPR) was at the end of 1980 3,091,900, at the end of 1981 2,690.600, at the end of 1983 2,185,700. [Taras, 1986, p. 38].

[27] "...property is not the only sphere of phenomena in which the classical system is unable to cohabit lastingly with institutions, customs, attitudes, and norms alien to it. The mature classical system cannot tolerate contrary political opinions, self-governing institutions, and organisations independent of the political institutions organized from above; cultures and world views other than the official ones; or free-market exchange between autonomous economic entities. All these phenomena, though they may recur time after time, are confined into an ever narrowing area. Individual behaviour is deeply imbued with conformism: spontaneous use of the ideas and working abilities deriving from a spirit of enterprise is virtually ruled out, as are independent critical opinions and rebellion against superior organisations." [Kornai, 1992, p. 367].

was the internal weakness at the same time. [Komai, 1992, p. 383] In other words, the system was not robust. A system is robust when changes in one or the other part constituting the system do not negatively affect the working of the system itself. The bigger such changes can be, the more robust the system. Parameters of the components can change within a relatively large margin, while the influence on the system as a whole stays small. Robustness is relative: a system can be robust to a change in one component, but not for a change in another component. The socialist system was not robust, but rigid. It looked like a solid building in which there is no flexibility for movement. An incident or change in a small part works through the whole building, which because of that essentially changes and often collapses.

6. Increasing transaction costs versus incentives at the beginning of the transformation

It seems quite obvious that when an economic system transforms towards another co-ordination mechanism, initially transaction costs increase due to the investment in 'fixed' transaction costs, disappearing networks and allocation mechanisms that are not directly replaced by new ones, a slowly changing mentality, etc. It can be argued that at the beginning of the transformation from a planned economy to a market-oriented economy, besides other factors like the introduction of a 'hard budget constraint' for many companies, high market transaction costs were an important factor causing economic stagnation.

The question is to what extent transaction costs in the Polish economy increased as a result of the transition and to what extent the system change gave incentives for economic activity (and for whom). The costs of using the market (market transaction costs) were high due to the lack of an 'institutional infrastructure' that went together with changes in the institutional environment (laws, rules, property rights, etc.) and changes of institutional arrangements (privatisation, administrative reforms, etc.), while for example consumer preferences at the beginning of the transformation were quite unstable. A question is which advantages and disadvantages the lack of clear rules brought about at the beginning of the transformation. Furthermore, there was a large value in the public domain because property rights were not clearly defined at the beginning of the transformation. The struggle for obtaining the property rights can lead to an inefficient property rights order. Although the fairness can be disputed, it can be argued that the partly 'spontaneous privatisation' which already started before 1990 in Poland and the later

legalised take-over of state-owned enterprises by 'insiders' is an important factor in the establishment of (relatively) efficient institutions, because it, among others gave part of the bureaucrats under the old system an interest in the new system.

The transformation at the beginning of the 90s was accompanied by a recession, but in 1993 the economy started to grow again. The path of growth in Poland was L-shaped when the GDP-index and the index of Gross Industrial Output are taken into consideration (i.e. a sharp decline in GDP at the beginning followed by a longer series of annual growth rates of 5-6%). Interesting is the 'systemic explanation' given by Blanchard[28] for the U-shaped GDP-index in former planned economies (in fact, the Polish L-shape was a more extreme variant of Blanchard's U-shape). The most important cause is 'disorganization'. The links between the centrally planned entities were not immediately replaced by market operations, which was accompanied by the impact of price liberalisation, the elimination of subsidies and the replacement of 'soft budget constraints' by 'hard budget constraints'. In other words, the institutional environment changed, as a result of which the institutional arrangement became less useful, but market institutions were not developed enough at the beginning of the 1990s. High transaction costs (mainly search and negotiation costs, although the opportunistic behaviour of adventurers who wanted quick profit must not be underestimated) followed and less economic activity took place than would be the case under (more) developed market institutions and planning.

Blanchard [1997, pp. 17 and 31] explains this as follows. State-owned enterprises (SOE) obtained inputs from a single supplier. Although liberalisation can take place overnight, this is not the case for the situation with respect to the number of suppliers. The difference is that under market circumstances suppliers have other private market opportunities about which the buyer has no knowledge. There were numerous 'bargaining failures', and the production in the state sector collapsed.

Johnson and Loveman [1995] argue that besides this fall in output due to, among other things, increased transaction costs for large state-owned enterprises and the surviving technical inefficiency at the beginning of the transformation, much of the economic renewal was caused by the start-up of new companies. At the beginning relatively little capital was needed to start a business while much of the growth in this sector was stimulated by retained earnings. At the end of the 80s it was relatively easy to start a business due to low barriers to entry. Ini-

[28] Blanchard, Oliver, *The Economics of Post-Communist Transition*, Clarendon Press, Oxford, 1997; also mentioned in Lavigne [1999, pp. 157-8].

tial capital needed was minimal because of the nature of the business (small scale), and starting a 'spółka z o.o.' (a company with limited liability) was easy because trade law dated from before the second world war and the mentioned initial capital had devaluated much due to inflation. Because of this the unreformed banking system did not really impede the growth of this sector, and when it started to reform its role became more important.[29] Johnson and Loveman argue that "large-scale organizational changes within well-endowed capitalist enterprises is exceptionally difficult, slow, and quite often unsuccessful. The large state enterprises of Central and Eastern Europe faced far more difficult challenges with far fewer resources of all kinds." On the other hand, they argue, private entrepreneurs had strong incentives for "starting over"[30] created by the communist mismanagement of the economy "to such an extent that gradual economic liberalization gave rise to an almost unlimited number of markets in need of new and better products and services." [Johnson and Loveman, 1995, p. 3] The institutional environment needed for this, macroeconomic stability and trade liberalisation, were achieved almost immediately by the Balcerowicz Plan in 1990.

In general, small and medium enterprises in the private sector can adapt faster to new circumstances than (especially big) SOEs. SOEs faced disappearing channels for buying and selling, which resulted in high search and negotiation costs. The internal oganisation did not change so fast, and privatisation proceeded slowly. Besides the huge amount of markets to be served, an institutional vacuum (e.g. laws) created a lot of opportunities for starting a small business. Small enterprises simply employ less people, which makes them more flexible. But also the problem of co-operation is of importance. This was expressed strongly by an entrepreneur who said that it is better to be the only owner of a firm than to have a partnership, because a partnership only leads to fights about who is allowed to take decisions. A question for further research is to what extent such a business can survive in an environment of increasing competition. Big SOEs in the same sector needed more time in order to restructure, and would probably only later benefit from returns to scale of using the market. In other words, how do the incentives develop for aiming for an efficient set-up of companies, especially the large slow-reforming (privatised) SOEs. Is the institutional environment set up in such a way that the transaction costs are lowered

[29] Jeffry Sachs in the foreword of Johnson and Loveman [1995, p. xii].

[30] 'Starting over' is "the creation of a new business with new organizational forms and work practices that are free from the accumulated baggage of the communist period." [Johnson and Loveman, 1995, p. 5].

and there is an incentive for institutions to lower transaction costs further? These two are important conditions for further economic growth.

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