Is path dependence a useful concept to analyse the evolution of ownership structures in Central Europe? A theoretical and empirical discussion

Caroline Vincensini, University of Paris I

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The concept of path dependence was first elaborated for the study of technological change to take into account the possibility of a lock-in to durably inefficient solutions because of increasing returns and the influence of small random events. These features are appealing for the study of post-socialist institutional change which has displayed an unanticipated resistance to economic reforms designed to transform these economies into western-type capitalist economies, and an increasing number of analyses have resorted to the idea of institutional path dependence to explain this resistance. Technological path dependence is based however on precise economic mechanisms and the object of this paper is to discuss the transposition of the concept from the technological to the institutional sphere in order to specify its underlying institutional mechanisms: it cannot be supposed that the process of evolution of economic institutions, which we construe as formal and informal rules governing economic activity and resulting from redistributive conflicts, wholly mirrors technological change. We also aim to suggest a framework to analyse the evolution of ownership structures (the existing ownership forms and their relative weight) in Central Europe, which we see as one of the most interesting aspects of the post-socialist institutional transformation displaying path dependence. Indeed, we conceive of the ownership structure as an economic institution defining the rules relative to the use and distribution of resources and therefore of economic and political power, which is of a particular importance in the transformation of former socialist economies previously dominated by state ownership. We will therefore strive to illustrate this general approach with a reflection on the degree of path dependence in the evolutions of the ownership structures in Poland, Hungary and the Czech Republic.

I A theoretical discussion of the concept of path dependence

1. The origins of the concept: a discussion of path dependence in the technological literature

The concept of path dependence regarding technological change was first developed by P. David and B. Arthur. We shall start by analysing their definition and explanations of technological path dependence, then point out some shortcomings or ambiguities of their works, and finally suggest a few reasons why the transposition of the concept to institutional change may not be entirely straightforward.

• Definition and explanation of path dependence in the evolution of technologies

According to David (1985) and Arthur (1989), the choice of a technology is path dependent if it is non-predictable, difficult to change (locked-in) and inefficient.

David (1985) explains path dependence by three mechanisms based on the historical example of the QWERTY keyboard (which became dominant in spite of its inferiority compared to another technology): technical interrelatedness, economies of scale and quasi-irreversibility of investment. Technical interrelatedness refers to the need for compatibility between the keyboard technology ("hardware") and the typists' competencies ("software"): the more keyboards are set in QWERTY, the more typists tend to learn how to type on QWERTY boards, and the more typists have this competence, the more employers buy this technology.

Economies of scale, or increasing returns of adoption, result from the decreasing cost of using a QWERTY keyboard as it gains acceptance relative to other standards because it increases the probability that typists possess the necessary competencies. Finally, David observes that the costs of retraining typists to convert them from one standard to another are extremely high, which gives rise to a quasi-irreversibility of investments in specific keyboard skills.

Because of the increasing returns of adoption of a technology, David models this situation with the Polya urn scheme: each time a ball is drawn from an urn containing balls of several colours, a ball of the same colour is added. The probability of drawing a given colour therefore increases, and one colour will eliminate all the others. By analogy, the choice of technologies will lead to one eliminating another and the implication of the idea of path dependence is that this choice is influenced by random events (which colour/technology was drawn the first few times), and is irreversible (lock-in). As the technology is not chosen according to its efficiency but following increasing returns and random events, an inefficient technology may prevail.

Arthur (1989) develops a similar argument: a technology's market share depends not only on preferences and technical possibilities, but also on small historical events, which can lead to a lock-in because of increasing returns. "Historical small events" are "those events or conditions that are outside the *ex-ante* knowledge of the observer" (Arthur 1989 p. 118). According to Arthur, they determine which of several possible alternative equilibria emerges, and account for the non-predictability of the solution. Arthur considers that technologies display increasing returns because of two mechanisms. The first is learning by using: "the more they are adopted, the more experience is gained with them, and the more they are improved", and so the more they are adopted (Arthur 1989 p. 116). The second is network externalities or coordination externalities (p. 126): the first adopters of a technology choose according to their own needs and preferences and impose externalities on the following adopters by not exploring promising but costly technologies which could have brought higher returns to all later on. The combination of the role of small events and increasing returns may therefore lead to the domination and lock-in of an inferior technology.

• A discussion of the sub-optimality of path dependent technological change

These technological analyses thus elaborate a concept of path dependence based on increasing returns (resulting from learning effects or network externalities) and small random events[1], which explain the possibility of a lock-in to an inferior technology. David and Arthur explicitly developed this concept as a criticism of the neo-classical view of technological change, and it appears that the main bone of contention is the possibility of sub-optimal outcomes. Indeed, neo-classical economists who respond to this challenge focus their discussion on this theme. In their discussion of path dependence, Leibowitz and Margolis (1995) start out by acknowledging that technological change may be influenced by initial conditions and therefore difficult to predict, may be costly to change (lock-in) and that there may be multiple equilibria. This is a progress compared to the vision of a smooth change where all alternatives are possible, but is a more restrictive conception of path dependence than that defended by David and Arthur emphasising also the role of increasing returns.

However, Leibowitz and Margolis dissociate path dependence from inefficiency by challenging the link between the influence of initial conditions on the outcome and the possibility of a lock-in on one hand, and its efficiency on the other. What is at stake here is the definition of the criteria of efficiency: they take into account the consequences of imperfect information and distinguish between static and dynamic comparisons of different

[1] David places more emphasis on the role of increasing returns and Arthur on that of small events.

solutions[2]. The difference is that the latter includes the costs of switching from one solution to another, whereas the former compares the respective efficiency of different solutions *ceteris paribus*. Therefore, one solution may be less efficient than another according to the static criteria but nevertheless more efficient according to the dynamic criteria because of switching costs: the gains accruing from the replacement of one technology by the other may be cancelled by the political and organisational costs associated with the change. Leibowitz and Margolis claim that if a technology is statically less efficient than another but if either its inferiority is not known *ex ante*, either switching costs are so great that the situation is not "remediable", then it cannot be deemed inefficient in any meaningful sense, since it was not possible to choose the right solution *ex ante* nor is it possible to replace it now with a better technology.

They therefore tailor their definition of efficiency so as to accommodate the fact that economic change may not reach the most efficient (static) solution but only the most efficient solution considering switching costs. This reconstruction dodges the criticism levelled by tenants of path dependence at the neo-classical vision of economic change that change does not always lead to the most efficient solutions as defined implicitly by the static criteria. Furthermore, although Leibowitz and Margolis accept path dependence in the sense explained above, they deny that a stronger claim of path dependence, namely that a more efficient solution is known and realisable but is not implemented because of increasing returns and/or small events, can be anything else but a rare occurrence depending on extremely restrictive conditions[3]. Finally, they also introduce the idea that path dependence, interpreted as a market failure, can be partially overcome by several mechanisms (communication between agents, planning and institutional solutions such as property rights giving incentives to internalise the effects of path dependence), which increase the efficiency of the final result. We will come back to the ways in which path dependence can be overcome later on.

It can be noted that David's (1985) position on this distinction between the two efficiency criteria is not entirely clear. At the beginning of his article, he claims that QWERTY's inefficiency relative to another technology was proved by experiments showing that the costs of conversion (costs of retraining the typists) from QWERTY to another standard are amortised within ten days with the productivity gains. However, he deduces later on from the high costs of software conversion that the investments in specific keyboard competencies are quasi-irreversible (and therefore greater than the gains expected from the change of technology). Thus, there is a doubt as to whether QWERTY is really inefficient according to the dynamic criterion or not.

• Obstacles to the transposition of path dependence from technologies to institutions

Although the premise that "history counts" is appealing for the study of institutions in general and of institutional change and ownership changes in transition countries in particular because of the obvious role of legacies, the concept of technological path dependence as developed by David and Arthur rests on precise economic mechanisms whose relevance for the institutional sphere cannot be simply assumed. We point out three main obstacles to the transposition of the idea of path dependence from technologies to institutions related to the underlying mechanisms, the definition of the efficiency of an institution, and the underlying vision of technological change.

First, any endeavour to analyse institutional change from the point of view of path dependence must examine what economic mechanisms it could rely upon. The assertion that

[2] They also suggest that technological change may be a case of choosing between equally efficient solutions, where the choice is influenced by the initial conditions but is not inefficient.

[3] "There must be agents who know enough to make correct choices but who fail to take advantage of the implied profit opportunities, and at the same time, adopter who generally know nothing more than the payoff going to the next adopter. These are very restrictive conditions" (p. 216).

institutions display increasing returns of adoption must be substantiated: it is not self-evident that the adoption of an institution or an ownership form by some increases the likelihood that others will also adopt it, nor that its generalisation increases its efficiency, as for technologies. For example, Groenewegen and Vromen (1997) remark that there is no particular reason why a firm should adopt an M form organisation only because its partners and/or competitors have adopted it. Network externalities may be relevant concerning institutions, but the way they come into play must be carefully specified. It also remains to be discussed to what extent institutions give rise to investments in skills that might prove quasi-irreversible. So the technical and cognitive mechanisms of path dependence must be properly specified to become entirely relevant for institutions.

Second, one of the main thrusts of the theory of technological path dependence is the possibility that it might lead to an inefficient solution (defined either by the static or the dynamic criterion). However, measuring the comparative efficiency of different institutions, or even of different technologies for that matter, is far from straightforward. In both cases, the premise that the best technology or institution can be identified *ex ante* is problematic as its efficiency can only be observed if it is tried out, which is not independent from its adoption. Furthermore, measuring the efficiency of an institution *ex post* is a delicate task. The link between institutions and efficiency is not easy to establish because of the numerous mediations between an institution and its effects on efficiency measured at firm level. For example, North (1990) explains that institutions influence organisations which in turn, combined with the economic environment, influence economic behaviour, so the link between institutions and efficiency is very complex. Moreover, institutional rules are not finalised (they do not pursue specific goals, see Chavance 2000), so it is difficult to define a relevant criterion to asses institutional performance. Also, considering the interdependence between institutions, it seems more relevant to observe the efficiency of the entire institutional framework and over a long time span than of a single institution. Finally, many economists who are interested in institutional change consider that economic systems are rarely in a state of equilibrium, especially in the post-socialist transformation, which makes it difficult to consider that an institution is ever really efficient. So the qualification of the relative efficiency of different ownership forms *ceteris paribus* is questionable, all the more as several ownership forms may be equally efficient.

Finally, the general vision of technological change implied by the Polya urn model raises two comments. First, it indicates that there is uncertainty as to the winning technology, so multiple equilibria exist, but it is certain that at each equilibrium a unique technology will eliminate the others in a given technological field (standardisation process). In the realm of institutional change it is possible to conceive of a situation where several institutions continue to coexist (existence of different ownership forms in the same sector for example) because the advantages of "institutional standardisation" are far from obvious, which is related to the problem of increasing returns of adoption of an institution. So the idea of institutional diversity seems more relevant than that of institutional standardisation. Second, all theorists of technology do not share this vision of technological change. Following Schumpeter and neo-schumpeterians such as Dosi, some stress that technological change results from evolutionary recombinations of existing knowledge and technologies rather than from the introduction of new ones to replace old ones. Paradoxically, some defenders of institutional path dependence will rather refer to this alternative interpretation of technological change and will develop the idea of "institutional *bricolage*", thereby inventing new technological antecedents for institutional path dependence.

Thus the idea of path dependence in institutional evolution (influence of initial conditions and small events, lock-in, doubts on efficiency) is appealing but its underlying mechanisms must be explained. While some of the economists seeking to transpose it to the institutional sphere have disregarded this, others have offered specifically institutional explanations of path dependence.

2. Path dependence in transition studies: a typology

We present here a sampling of the literature applying the concept of path dependence to institutional change. We lay no claim to exhaustiveness but focus only on scholars of the post-socialist transformation and of ownership transformation[4] and seek to illustrate the diversity of approaches of institutional path dependence. We distinguish three such approaches differing according to their beliefs as to the degree of path dependence of institutional change and according to the economic mechanisms they base it on. The first two adopt the idea that institutional evolution is path dependent, but whereas the first considers that the factors explaining technological path dependence can be transposed to institutions, the second introduces specific institutional mechanisms; the third approach calls into question the degree of institutional lock-in.

• Institutional path dependence as a transposition of technological path dependence

Fortunately for our discussion, David (1994) himself has addressed the question of the transposition of path dependence from technologies to institutions[5]. Although he cautions that technologies and institutions are not wholly similar[6], he considers that three causes of path dependence are common to both and that institutional change is path dependent as institutions evolve incrementally and cannot be understood as efficient solutions to allocation problems. First, he argues that institutions are created through shared historical experience giving rise to precedents, mutually consistent expectations and ideal-type social roles; path dependence arises from the repetition of the same solutions. He sees a parallel between the learning of these common experiences or ideal-type roles and the quasi-irreversibility of investments in competencies in the technological realm. Second, he points out that organisations rely on information channels that represent a form of durable capital and that individuals realise a form of irreversible investment as they learn the organisation's information code. This constrains the further evolution of the institution and mirrors once again the quasi-irreversibility of investments in skills linked to a given technology. Third, he believes that technical interrelatedness also applies to institutions as regards the coherence of institutional rules (rather than institutional "hardware" and "software"): the diverse rules and aims of an institution display a certain systemic coherence and new rules or procedures will be constrained by the necessity to conform to this coherence. The first two arguments are of a cognitive nature related to bounded rationality and the third is more "technical" or systemic. Institutional change is thus constrained by the initial state of the institution and may be locked into a sub-optimal trajectory because of random events and because of its self-reinforcing nature due to the accumulation of knowledge.

David's analysis raises several objections. The first, anecdotal, is that institutional economists have taken no heed of it and have proposed their own transpositions of path dependence from technologies to institutions. More seriously, the extreme confusion as to what David means by "institution" seriously undermines the scope of his analysis. He speaks of institutions to refer to such diverse constructs as informal conventions, the family, religion, organisations, or firms, and we believe that most of his arguments are not relevant for the institution we are interested in, ownership. The mechanism of consistent expectations based on the study of conventions does not seem sufficient to explain path dependence of ownership

[4] Although North has contributed several remarks to the question of post-socialist transformation, this is not his main field of enquiry but he is included here because of the influence of his works on this theme.

[5] He writes that technological path dependence gives a "general insight" or "a first approximation" into institutional path dependence and that both are linked by an "analogy" and a "close parallel".

[6] because institutions coordinate human beings ("volitional actors") and not sets of machines, and because they tend to work more smoothly when they are used instead of wearing out.

structures considering the nature of ownership as a formal economic institution whose elaboration involves the emergence of informal conventions but relies also very importantly on formal mechanisms of official codification (legislation on ownership). The irreversibility of the acquisition of knowledge on the information channel of the institution applies neither to firms, as agents change firms and adapt to their new environment, nor to ownership forms, as firms usually survive a change of their ownership form. Moreover, this irreversibility is only asserted, quoting K. Arrow, and not justified. Finally, David's conception of institutional path dependence leads to a very gradual vision of change, where radical change is uncommon and usually results from the collapse of excessively rigid institutions in the face of pressures of their environment. On the other hand, his argument on the coherence of institutional rules, even though he seems to have in mind organisational rather than institutional rules, seems more relevant and is not dissimilar to North's conception of the institutional matrix (see below). On the whole, it appears that path dependence of ownership structures has to be grounded in economic mechanisms similar to but distinct from those of technological path dependence.

In a similar vein, North has attempted to transpose path dependence from technologies to institutions in *Institutional Change and Economic Performance* (1990, chapter 11)[7], in which he argues that the mechanisms developed by Arthur (1989) also apply to institutions[8]. He believes that institutional change is subject to four types of increasing returns: set-up costs (when institutions are created *de novo*), learning effects (organisations will evolve to take advantage of the opportunities offered by the institutional framework), coordination effects (by contracts with other organisations and by induced investments through the polity in complementary activities) and adaptive expectations (increased contracting on the basis of an institution reduces uncertainties as to its permanence). Thus "the interdependent web of an institutional matrix produces massive increasing returns" (p. 95), and unexpected solutions may arise. Institutional path dependence is then defined as the fact that "the process by which we arrive at today's institutions is relevant and constrains future choices" or "a way to narrow conceptually the choice set and link decision making through time; it is not a story of inevitability in which the past neatly predicts the future" (p. 94 and 98).

However, although North strives to show the parallels with Arthur's works, two major differences can be pointed out. First, as he notes himself, the underlying causes of increasing returns are different: they result from learning effects linked to the existing institutional framework and from network externalities and are relevant at the level of the whole set of institutions (the "institutional matrix") rather than for a specific institution. Second, according to North, these self-reinforcing mechanisms are only one of the two factors influencing institutional change and cannot explain the possibility of durable inefficient institutions without the other factor, the imperfection of economic and political markets. This can lead to the lock-in of an institutional path because of the imperfection of feedbacks on agents' subjective models and because existing organisations and interest groups, arising from the institutional framework, have a stake in the existing constraints and will shape the polity to this end. This explains that an outside shock (pressure for change) will affect two societies differently: the institutions requiring adaptation will not be the same, the solution will be determined by the differing relative bargaining power of agents and agents will have different subjective models. So North complements the transposition of technological increasing returns with specifically institutional explanations linked to mental and political processes. He concludes that institutional change is more complicated than technological change because of

[7] North's arguments concerning institutional path dependence have undergone significant changes so we analyse separately his first attempt in 1990 and his subsequent approach (North 1994, 1997).
[8] He states that Arthur's analysis is a good "approximation" of the question of institutional change, with which it has "much in common", and is "coextensive" with institutional increasing returns.

the interaction between the economy and the polity and because of cultural legacies.

North's justification of the relevance of Arthur's mechanisms for institutional change is only partial as he modifies the underlying processes, minimises the role of small events, and argues that increasing returns *per se* do not necessarily lead to inefficient solutions. Over time, he has accentuated his difference with the technological version of path dependence and has developed an increasingly original conception of institutional path dependence that we expose in the next section.

<u>• Institutional path dependence as distinct from technological path dependence</u>

Some scholars of institutional change have probed deeper into its characteristics and have developed specifically institutional explanations as to why institutional change is generally slow, constrained by past events and possibly inefficient. This distinct concept of institutional path dependence is inspired from its technological counterpart but results from autonomous mechanisms. We develop here the analyses of Stark and North, which have established a sort of standard notion of institutional path dependence, and that of Campbell, which includes an additional mechanism compared to the standard view.

Stark (1992) was one of the first to apply the idea of path dependence to institutional change in post-socialist economies and more specifically to privatisation strategies. He asserts his filiation with the works of David and Arthur (whom he explicitly quotes) and takes up the idea of slow and constrained change, yet he (unwittingly?) develops distinct arguments. He argues that social change is the result of interactions between social groups, that privatisation strategies are constrained by institutional legacies among which the "paths of extrication" from socialism and by strategic behaviour of actors constrained by the existing institutions and resources (essentially political resources). He therefore opposes the idea that the post-socialist transition takes place in an institutional vacuum and stresses the evolutionary nature of institutional change, which does not preclude rapid and radical change but insists on legacies. He also highlights that institutional change generally takes the form of the "recombination, rearrangement or permutation" of old elements in a new way and resembles more "*bricolage*" than deliberate blueprints, referring implicitly more to Schumpeter's conception of change than to David and Arthur's. Stark concludes that institutional change leads to a variety of outcomes in different countries, which complicates the evaluation of the efficiency of institutional change.

Stark's approach displays a certain continuity with the technological one to the extent that institutional change does not result from the rational design of efficient institutions. It nonetheless differs because it no longer refers to mechanisms of increasing returns nor to the role of small historical events, which are rather replaced by the idea that historical legacies give rise to economic and political regularities that can be included in the analysis, and because the judgement on the efficiency of the observed evolutions is much more cautious and is better understood in terms of a diversity of outcomes than in terms of an efficiency ranking. His conception of the path dependence of privatisation strategies, illustrated by the differences between the Hungarian, Polish, Czechoslovak and East-German privatisation strategies resulting from specific institutional legacies and the varying bargaining power of social groups, is generally convincing. However, it seems to embody two distinct versions of institutional path dependence that are not entirely compatible: the fact that path dependence entails a recombination of existing elements and the fact that it results from the interaction between social groups hardly seem to have any logical link.

North develops his analysis in subsequent articles (1994, 1997) in which he increasingly distances himself from the technological conception of path dependence and is more precise than Stark on institutional path dependent mechanisms. His general framework is that of economic history and he seeks to explain the differing degree of development of the different geographical regions of the world over the centuries (ex. the performance gap between the Western world and the rest of the world, or, among developed countries, between Spain and Britain since the 15th century). In his Nobel lecture (1994), North speaks of path dependence in economic history to refer to these development gaps: history is path dependent because all countries are not equally developed and the less developed ones generally cannot catch up with the more developed ones. In his 1997 article, bearing on post-socialist countries, path dependence refers to the fact that the institutional framework shapes choices and constrains the institutional path that may become locked-in.

To explain this path dependence he still refers to David and Arthur but states more clearly than in 1990 that the two main cumulative processes are cultural and political. First, the capacity of individuals to implement performance-enhancing institutions depends on their beliefs and mental models which are influenced by the cumulative accumulation of knowledge in a given society, otherwise known as culture ("learning is a incremental process filtered by culture", 1994 p. 364). Overlooked by neo-classical theory, ideology is also important because bounded rationality entails that individuals cannot construct a "true theory" of the world and so multiple equilibria exist. Second, institutional change is influenced by cumulative political processes: "[institutions], or at least the formal rules, are created to serve the interests of those with the bargaining power to created new rules" (1994 p. 361) and there exists a "symbiotic interdependence" resulting from complementarities, economies of scope and network externalities between the existing formal and informal rules and the interests of the members of the organisations created as a result of the institutional matrix. The institutions created by interest groups cumulatively increase their bargaining power and the groups strive to maintain these institutions (1990 p. 99). So "the difficulty of turning economies around is a function of the nature of political markets" (1994 p. 366) which have many reasons to be imperfect (uncertainty is strong and enforcement of political agreements is difficult).

Finally, North notes that the direction of change is to a large extent unintended as entrepreneurs of institutional change do not internalise the externalities of their actions and as the outcomes are generally different from the initial intentions because of bounded rationality and cumulative effects (1997). He concludes on the limited capacity of a policy of institutional design to improve economic performance in the short term because of path dependence of institutions and cautions against a simplistic understanding of institutional change in the post-socialist context that would lead to ill-advised policies of fast privatisation and an underestimation of the difficulties and duration of the transition.

North thus develops a specifically institutional concept of path dependence based on cognitive and political processes in the institutional matrix, more interesting than the simple transposition to institutions of technological path dependent mechanisms. But his analysis raises three problems. First, the influence of cognitive factors and ideologies on the evolution of institutions is extremely difficult to measure and the causalities outlined remain very general. Second, this applies more generally to all mechanisms involved such as coordination externalities, the costs of institutional creation or the costs of the imperfection of political markets, which are never precisely specified. Third, his approach to economic performance, defined by macro-economic growth resulting from the institutional framework, is extremely long term (over several centuries) and to a certain extent tautological (efficient institutions are those which lead to growth) and places serious limits on the determination of the efficiency of certain institutions, such as ownership forms, over a much shorter time span.

Stark and North offer two examples of a specific institutional analysis of path dependence. Their conceptions differ as Stark places more emphasis on institutional *bricolage* while North stresses the possible inefficiency of the institutional matrix resulting from political and cognitive cumulative processes. These subtle differences are however little noted and a standard conception of institutional path dependence has emerged: several authors refer to institutional path dependence, understood as a slow and constrained evolution that may be durably inefficient, as a now established concept without delving into the explanation of its mechanisms, considering they have been discussed elsewhere. They consider implicitly that it results from historical constraints and political and/or cognitive mechanisms. For example, Eggertsson (1994) argues that post-socialist economic systems are path dependent because of structural legacies (inefficiency of their financial systems, obsolete structure of their industry…) and because of the political clout of large firms and of mid-level bureaucrats who are in a position to block economic reforms. He concludes that institutional change will therefore be incremental and slow and the systemic change might take up to several decades.

Campbell (1991, 1996, 1997) also contributes to the explanation of the distinct mechanisms of institutional path dependence but distances himself from this standard vision by complementing it with an additional path dependent mechanism. His general theoretical outlook is evolutionary[9], as opposed to North's new institutional approach, and his contribution rests on the path dependent nature of interpretation and search mechanisms due to the enabling nature of institutions, whereas the preceding analyses stress only the path dependent effects of selection mechanisms related to institutional constraints.

Elaborating on his first model of evolutionary institutional change (1991) in two subsequent works (1996, 1997), Campbell first stresses as does North that the selection of institutions is constrained by pre-existing institutional arrangements, power relations, political struggles, state actions and cultural traditions, whence institutional path dependence. He then goes on to add the enabling role of institutions causing path dependence at two distinct levels. First, he underlines that mental models or "interpretative frames" have a bearing on institutional change because the way actors define problems when confronted with a pressure for change influences the outcome. Since he also argues that interpretative frames are also "institutionalised" in the course of time and change incrementally, this leads to path dependence of institutional change. In the case of transition economies, he argues for example that the success of the neo-liberal ideology in the early 1990s is related to the world-level tendencies in the relative influence of keynesianism and neo-liberalism but also to the reflections on reform of the socialist system developed in the preceding decade because they were based on a rather rudimentary comprehension of markets compatible with neo-liberalism (Campbell 1996). This argument goes further than North's cognitive explanation of path dependence as it also takes into account the way preferences are formed, which extends path dependence to a new "upstream" inkling of institutional change. Second, Campbell contends that institutional path dependence also results from the enabling role of institutions in the process of search for new solutions: existing institutions constitute a *répertoire* from which agents can recombine elements ("institutional *bricolage*") and invent new solutions dependent on the preceding institutions. He illustrates this bricolage with the works of Stark (1996) concerning "recombinant property" in Hungary. Significantly, he refers to Schumpeter's idea of combination and not to David and Arthur's vision of technological path dependence.

Campbell thus considers that the evolutionary (path dependent) nature of institutional change arises at the same time from three sources: from the way the interpretative frames define the problems to be solved by institutional change, from the search process and design

[9] He speaks more readily of evolutionary change than of path dependent change, but their characteristics are obviously similar: change is evolutionary if it is cumulative, constrained by existing institutions and constellations of actors, and may be inefficient (Campbell 1991). Although "path dependent" and "evolutionary" are not wholly synonymous, because an evolutionary change implies processes of creation and adaptation that are not necessarily present in a path dependent change (Dosi 2000, Introduction), Campbell's developments on evolutionary change are nevertheless considered relevant for the analysis of institutional path dependence.

of new solutions characterised by recombination, and from constrained and political selection among the possible solutions. He concludes that institutional change may be inefficient and that even seemingly radical changes are very path dependent[10]. With his new explanation, Campbell elucidates the relationship between *bricolage* and the path dependent role of interest groups which was unclear as expressed by Stark: *bricolage* resulting from the search process is one of the sources of institutional path dependence alongside political struggles, not an outcome of these struggles. However, although Campbell criticises the path dependence approach for being too linear, with a too strong lock-in mechanism, his remark on the evolutionary nature of revolutionary change makes it difficult for him to conceive of a discontinuous change and his endeavour to develop the analysis of preference formation encounters the same difficulties related to the limited capacity of economics to contribute to this field as North's interest in ideology.

• A qualification of institutional path dependence: questioning the degree of lock-in

We now turn to economists who question the degree of institutional path dependence by pointing out either that institutional change also includes teleological elements, either that strategic behaviour can lead to path shaping as opposed to path dependent processes.

While Federowicz (1997) recognises that the idea of institutional path dependence in the post-socialist transformation is a valuable reaction to the initial constructivist vision of the transition, he criticises its exclusive stress on institutional legacies as obstacles to change and its limited capacity to explain radical changes. He suggests that post-socialist institutional change can only be properly understood by taking into account, alongside path dependent processes, the teleological role of what he calls "anticipated institutions". His thesis is that these "future oriented mechanisms of mobilisation of social resources" or "blueprint ideas, no matter whether true of false, simplistic or sophisticated" partly explain institutional change. They change people's expectations, which in turn affects their behaviour, and are instruments of change through an implicit selection process: anticipated institutions are either rewarded or punished and therefore either followed or abandoned. According to Federowicz this "institutional change through anticipation" helps to understand why radical change can happen in spite of the path dependent factors constraining it and of the fundamentally stabilising role of institutions in economic life. Federowicz concludes that path dependence is necessary but insufficient to understand institutional change and that a teleological or "path finding" element, the anticipation of institutional change by economic actors, must be added.

This criticism of path dependence rightly points out its two aforementioned shortcomings. However, Federowicz's interesting idea of anticipated institutions is not wholly clear for two reasons. First, his definition of anticipated institutions as "peoples' expectations of the plausible institutional change" or "interplay between the macro or systemic level and the level of participants' strategies" does not explain to what extent these anticipations really are institutions, and he is contradictory on their formal or informal nature. Second, there seems to be a contradiction between the self-realising and self-reinforcing nature of anticipated institutions (he compares them to inflationary expectations) regardless of their accuracy or their efficiency and the fact that they are selected or tested according to the rewards they entail. Federowicz's most interesting insight can finally be reconstructed in the following way: anticipations regarding institutions (but which are not themselves institutions) help to bring about institutional change by giving agents a vision of where the process is bound. Whereas Campbell underlines the importance of recombination in the search process to understand institutional path dependence, Federowicz adds that teleological elements come into play in the search mechanism and may moderate path dependence.

[10] His second article in Campbell, Pedersen (1996) is entitled "The evolutionary nature of revolutionary change in post-socialism".

Hausner et al. (1995) are also critical of what they perceive to be a standard view of institutional path dependence, which they define by institutional recombination and by the limitation of the range of institutional evolution by institutional legacies (among which the political and economic structure, the constellation of social forces and the way the system was overthrown) that shape expectations and patterns of conduct. These processes can lead to the emergence and persistence (lock-in) of inefficient institutional trajectories because of self-reinforcing mechanisms, notably the effects of bounded rationality. Although Hausner et al. accept the main thrust of this view of institutional path dependence, that institutional evolution is bounded by legacies[11], they criticise some of its other aspects for two reasons. First, they claim that this sort of model does not explain the mechanisms leading to a lock-in, but this argument overlooks the analyses of North, Stark and others. Second, they criticise the deterministic view of an organic evolution of institutions immune to purposeful action that arises from this vision of path dependence and they question the degree of lock-in of institutional change. This second stronger critique leads them to propose an alternative vision of institutional change trying to accommodate structure and strategy at the same time[12].

Far from reverting to neo-liberal voluntarism claiming that a new institutional system can be created in post-socialist countries by social engineering and by spontaneous market forces because the systemic vacuum is accompanied by an institutional vacuum, they strive to develop a middle-ground approach combining inherited constraints and strategic actions. Their "path shaping" perspective of institutional change considers that choices are constrained by the path dependent context but that there exists nonetheless a range of possible choices which can open up new institutional possibilities. Whereas in path dependent approaches actors only "play" within the existing framework of rules defining the pre-given opportunities, here they can choose strategically "where to go" within the limits defined by the inherited constraints and can even reformulate the rules of the game to eventually eliminate certain constraints over time. Institutional change thus results from "path dependent path shaping". But although Hausner et al. rightly reintroduce the path shaping possibilities offered to actors, they probably overestimate the degree of determinism implied by path dependent approaches. We will adopt an encompassing definition of path dependence, considering that "history matters" because of legacies and also because of strategic path shaping actions that influence the process of institutional change.

Thus both Federowicz and Hausner et al. accept the possibility of a durable lock-in into an inefficient institutional path but argue that the process is more complex and that path dependence is not sufficient to explain institutional change because to a certain extent it may also be overcome, or shaped, by teleological anticipations or strategic behaviour[13].

3. A critical reformulation of institutional path dependence applied to ownership structures

As we have seen, institutional path dependence, understood as a historical cumulative process of evolution constrained by legacies and influenced by strategic actions leading to possibly locked-in but not necessarily inefficient situations, has a certain kinship with its technological counterpart. But it can concern institutions at different levels, relies on distinct mechanisms, may be tempered by path shaping and does not always entail acceptance of the consequences of path dependence in terms of inefficiency. The analysis can focus either on a given institution, on an institutional policy (ex. privatisation strategies) or on the whole

[11] They refer to technological theories of path dependence but only in order to state their difference, recognising only that institutional innovation is "reminiscent" of technological innovation.

[12] Their criticism of the standard view of path dependence is actually better understood in relation to the to the debate on the sociological theory of change opposing the roles of structure and strategy than in relation to the opposition between neo-liberal and heterodox economics.

[13] It can be noted that these explanations of the possibility to overcome path dependence do not rely on the mechanisms suggested by Margolis and Leibowitz (1995), who had in mind public policy instruments to overcome market failures (planning, devising efficient property rights…) and not strategic actions.

institutional framework. As our object is ownership trajectories it seems relevant to seek to observe and explain path dependence concerning two institutional dimensions: ownership forms and the institutional framework in which they are embedded. We shall sum up our vision of the underlying mechanisms of institutional path dependence and then articulate them in an analytical framework concerning the evolution of ownership structures, before discussing the extent to which the concept of path dependence differs from neo-classical economics, but we first start by a short discussion of the idea of institutional trajectory.

• Technological and institutional trajectories

We comment briefly here institutional economists' reference to institutional trajectories in relation to path dependence in much the same way that studies of technological change have spoken of technological trajectories. The technological version of the concept was developed by Dosi (1982). In his framework a technology is defined by a set of knowledge and, by analogy with scientific paradigms (Kuhn), a technological paradigm is a pattern of solutions to technological problems based on this knowledge (it defines "the field of enquiry, the procedures and the tasks"). A technological trajectory is then "the development of the normal pattern of problem solving" based on a given technological paradigm. It is characterised by an inertia resulting from cumulative effects which make it difficult to switch from one trajectory to another unless the technological frontier ("the highest level reached upon a technological path with respect to the relevant technological and economic dimensions") has been reached and a new paradigm must be found to pursue technological innovation. Considering these characteristics, it is tempting to transpose the concept and link the idea of evolution along a path with cumulative mechanisms with institutional trajectories[14].

The underlying mechanisms are however not entirely similar. Although it is possible to consider that at a very general level institutional trajectories rely on "institutional paradigms", such as the general conception of a socialist or a capitalist economy[15], it is difficult to identify them with as much precision as in the technological case. Furthermore, two aspects of technological trajectories seem delicate to transpose to institutional change. First, the inertia of institutional trajectories does not derive only from the cumulative nature of knowledge accumulation but also from systemic and political processes. Second, the fact that technological trajectories display a progress (an improvement in the "trade-off among the technological variables which the paradigm defines as relevant") bounded by the technological frontier does not transpose easily to institutions because of the difficulties involved with measuring "institutional progress" and because it is unclear how the possibilities of institutional change might peter out due to the limitations of the underlying knowledge.

On the other hand, if we consider that this frontier is grounded in the possibilities of development of the existing institutional framework, the idea that the trajectory may be reoriented because of the limits encountered becomes plausible in regard to the exhaustion of the socialist system for example (cf. "reform fatigue"), and also applies fairly well to the idea that agents can behave in a path shaping manner to overcome these limits. So we take up the notion of institutional trajectory, complementary to institutional path dependence, to define

[14] The transposition is therefore double as Dosi develops a technological version of the concept of paradigm first elaborated in epistemology (Kuhn) which is then adapted to institutions.

[15] This recalls Kornai's (1992) view of system paradigms: each economic system is defined by a causal chain in which the political sphere (the dominant ideology and the political system) determines the subsequent elements of the chain (ownership forms, coordination mechanisms, motivations and main behavioural traits of agents, principal economic phenomena). If the political inkling is modified, there is a change in the systemic paradigm.

the general direction of institutional change analysed at different levels of generality[16] and influenced by the path dependent and path shaping mechanisms to which we now turn.

• Mechanisms of institutional path dependence and path shaping

We explain here the three main types of mechanisms, systemic, cognitive and political, which we consider explain institutional path dependence and path shaping. We also summarise our position on the efficiency of institutional evolution.

• We consider that the first explanation of institutional path dependence is related to the fact that economic institutions constitute a more or less coherent system. For the functioning of the economic system to be possible institutions must be compatible and coherent and the system therefore tends to favour the development of institutions congruous with the whole and to stifle the emergence of other institutions. This mechanism is developed for example by Kornai (1992) with his idea of the coherence of economic systems because of the affinity[17] between their component parts, among which institutions, by North's (1990, 1997) argument that the institutional matrix produces increasing returns in the evolution of institutions, and by David (1994) who speaks of the path dependent effects of the coherence of institutional rules. This mechanism can be interpreted as an institutional version of increasing returns of adoption applied to an institution in relation to the general institutional framework. It may lead to the reinforcement of inefficient institutions if the general framework is not conductive to the emergence of efficiency-enhancing institutions (North 1990). As applied to ownership structures, this argument suggests that the range of emerging ownership forms is constrained by the rest of the institutional framework and that feedback effects will probably appear from the ownership structure to the other economic institutions, reinforcing the path dependent nature of institutional change.

This self-reinforcing tendency of institutional change contributes to minimising the role of small historical events because the inertia generated by the institutional framework, complemented by the constraining role of historical and political regularities, is not easily swayed by a small event. Thus North (1990) considers that although specific short run institutional changes may be influenced by small events and are to a large extent unforeseeable, the overall institutional trajectory is both more predictable and more difficult to alter. And not only do small events contribute very little to explaining the indeterminacy of the result of institutional change or the possibility of a lock-in, but furthermore, whereas small events cannot be integrated into analyses of technological change and represent the limits of our understanding (Arthur 1989), institutional inertias and historical regularities become one of the variables defining the possible range of institutional change and are more important explanatory factors than randomness. This does not mean that institutional change can be entirely predicted nor that small events have no explanatory power whatsoever but the indeterminacy relates more to the impossibility of predicting how the coherence constraint will influence institutions or how the conflicts between interest groups will be resolved than to the perturbing influence of random events.

• According to the cognitive argument, institutional change can be interpreted as resulting from modifications of existing institutions by agents whose cognitive capacities are limited (under the bounded rationality hypothesis) and therefore constrained by the existing stock of knowledge, their perception of the economic environment and the way they devise

[16] The post-socialist trajectory as opposed to the capitalist one; specific national trajectories inside the general post-socialist trajectory; the ownership structure's or the financial system's trajectory of change inside a national institutional trajectory. The challenge is then to establish links between the different levels.
[17] He states that this affinity is permanently consolidated by a "natural selection" of institutions but apart from quoting Schumpeter, Hayek and Alchian, he does not indicate its functioning.

new solutions to problems (their interpretative frames and the search process). Institutional change in general and of ownership forms in particular displays sensitivity to initial conditions and increasing returns because it builds on existing institutions and knowledge, which channel change in certain directions to the exclusion of others[18] (lock-in). It also always incorporates a degree of recombination of existing elements because of the cumulative nature of knowledge accumulation. The path dependent effects of cognitive processes, inspired by evolutionary economics[19] whose elementary unit of analysis is indeed competencies, may be complemented by taking into account the forward-looking effects of a change of ideology or of the credibility of announced reforms: they may lead to the introduction of new institutional elements tempering the degree of recombination of institutional change (path shaping) and can be interpreted as a form of "anticipated institution" according to Federowicz's definition.

This explanation of path dependence, although obviously highly relevant, is extremely difficult to apply empirically for economists who dispose of very few analytical tools concerning cognitive processes and ideologies. North himself has never moved on to detailed accounts of these effects on institutional change[20] and none is to be found in the volume he has co-directed on empirical studies of institutional change (Alston, Eggertsson, North 1996). So we will comment on the cognitive sources of institutional path dependence when we can because interpretative frameworks or ideologies have clearly influenced institutional change, but we will essentially develop the other two mechanisms.

• We consider that institutional evolution proceeds also from the interactions and compromises in the conflicts between various interest groups seeking to defend their distributional interests and/or ideas (ideologies as forward-looking devices) and combines the path shaping and path dependent effects of these political factors. First, according to the structure of interest group representation in a country, the mechanisms of arbitrage between conflicting claims and the relative bargaining power of groups, groups can contribute to shaping the institutional evolution by influencing the elaboration of formal rules concerning ownership structures, whether at the level of precise ownership forms and privatisation methods or concerning the general institutional framework to the extent that it has a bearing on ownership structures. Agents can strive to shape strategically[21] the course of institutional evolution in order to modify the institutional trajectory[22] and create the conditions for its path dependent self-reinforcement (cf. Hausner et al. 1995). For example, the privatisation policies adopted at the outset of the transition can be understood as a path-shaping endeavour of governments to constrain their successors as reformers were unsure of the future course of events and wanted to prevent a reversal of the transformation towards a capitalist economy[23]. This signifies that path shaping actions and radical changes are possible but not that all changes are engineered: the unforeseeable aggregation effects of the behaviour of actors with potentially conflicting objectives or between rules at the level of ownership forms and at the

[18] David's (1994) reflections on the inertia related to internalised ideal-type roles can be related to this process.
[19] although North, closer to new institutionalist economics, has also stressed the role of cognitive processes.
[20] besides the declaration that "it is culture that provides the key to path dependence" (North 1994 p. 364).
[21] As our object, ownership forms, consists to a large extent in formal rules codified through the legislative process (laws on property rights, on privatisation methods, etc.), we tend to equate, perhaps excessively so, strategic actions of agents with political behaviour and to stress particularly political processes.
[22] Our conception of path shaping behaviour to overcome path dependence is not equivalent to Leibowitz and Margolis' argument that if agents can act to surmount path dependence then there is no lock-in nor path dependence in any meaningful sense, because we consider that even if agents manage to purposefully alter the institutional trajectory, its new orientation will not be independent from the preceding one.
[23] Several economists have developed the idea that agents can manipulate the institutional arrangement by strategic behaviour so as to lock it in to a certain trajectory, because the political costs associated with changing the arrangement that result from the existing framework are too high (ex. Roland 1997).

general framework level can lead astray the path shaping efforts and lead to unintentional changes or unintentional directions of change. This conception of the political determinants of institutional change is reminiscent of the theory of property rights for example, where agents perceive the gains of a new rights structure and engage in the necessary actions to change it. But it is less functionalist because it also takes into account the political process which runs into problems of interest definition and collective mobilisation and organisation, the effects of ideology (agents are not assumed to act only according to their material interests) and the probability of unintended effects.

Second, political legacies, alongside with institutional and structural legacies, contribute also to the path dependent nature of the evolution of ownership structures. The past balance of power determines the resources and influence enjoyed by interest groups and so their capacity for strategic action according to the cumulative process explained by North: the more a group influences institutional evolution, the more the evolving institutions favour its bargaining power and so the more it can influence institutional change. Furthermore, path shaping actions of one group are constrained by the actions of the other groups, whether they are passive (resistance to institutional change) or active (other conflicting path shaping actions). Thus strategic actions constitute a path shaping endeavour from the point of view of one group but constraints for the others, in particular for reform-minded governments. So the capacity for path shaping by strategic actions is constrained and partly path dependent.

To sum up, we do not consider that economic actors are only passive or resistant to change and constrain the government's voluntaristic institutional policies, but that political mechanisms give rise dialectically to path dependence and path shaping at the same time because actors have a bearing on the direction of change and can influence it strategically to their own ends in the limits defined by path dependent constraints (among which the strategic actions of others) which may be more or less malleable in the long term. This dialectic between structure and strategic action resolves for example a problem raised by Federowicz (1997) regarding the notion developed by Stark and Bruszt (1996) that networks mobilise resources for institutional change: Federowicz claims that Stark and Bruszt contradict themselves as networks cannot be at the same time agents of change and a part of the background of constraints. The idea of path shaping path dependence helps to understand that agents of change and the way they are organised constrain institutional design possibilities for other actors who seek to influence institutional evolution and for themselves (agents are constrained by their resources, linked to their current organisation) and that at the same institutional change is brought about by their actions. The main weak point of our outlook is the difficulty to define and measure the relative bargaining power of the different groups involved.

The effects of political processes on institutional change may lock it in to a certain institutional trajectory due to the increasing returns of the political process of institutional elaboration as outlined by North. We do not consider this to be contradictory with path shaping behaviour: lock-ins can result from the absence of spontaneous reequilibrating (market) mechanisms allowing institutions to switch to another trajectory, but may be overcome by strategic actions playing the role of outside shocks perturbing the functioning of a given institutional dynamic. Furthermore, the idea that institutional evolution can become locked-in does not convey any judgement on its efficiency.

• Discussion of institutional efficiency

We conclude this reconstruction of the mechanisms of institutional path dependence with a discussion on the degree of inefficiency of institutional change through general remarks on the definition of institutional inefficiency and on its relevance as compared to diversity.

Institutional inefficiency can be defined in a static or dynamic manner and by comparing the existing institutions with either future (eventually ideal) institutions, either past ones. On one hand, we take up the idea that the new emerging institutions may be inefficient as compared statically to other future possible institutional arrangements but prevail nonetheless because of the difficulties involved with switching from one arrangement to another. These difficulties are related to cognitive and political processes: bounded rationality and the cumulative nature of knowledge on one hand, and the pursuit of private group interests instead of social welfare, combined with the imperfections of interest representation and of political institutional design (especially in the transition context) on the other. The neo-classical critics of path dependence do not consider this inefficiency to be meaningful since the switching costs are greater than the gains (cf. Leibowitz and Margolis 1995). But according to us, one of the interesting insights of the institutional path dependence literature as compared to the first neo-classical analyses of the transition is to highlight the possible inefficiencies of institutional evolution as compared to ideal solutions because the transition is not taking place in an institutional void.

On the other hand, we do not believe that all new institutions are necessarily more efficient that the previously existing ones, as posited by certain theories. For example, in his survey of theories of institutional change, Weimer (1997) explains that what he calls the economic theory of institutional change, represented among others by Demsetz (1967) or the early works of North (1973), explains change by the realisation of Pareto-improving[24] opportunities: statically superior institutions may never be implemented because of switching costs, but any institutional change that does occur improves welfare. On the contrary, it seems possible that Pareto-reducing changes may take place because of the outcome of bargaining between interest groups. So one of the challenges of the empirical study of institutional change is to determine its effects on efficiency.

However, we have already discussed the difficulties of measuring institutional efficiency because of the complex mediations between institutions and the performance of economic entities, the interdependence between institutions in the institutional framework and the fact that the economic system can be considered as permanently in flux. We hold that the most relevant approach consists in evaluating the efficiency of institutions with a certain detachment in terms of long term growth and development, and taking into account the possibility that change is not necessarily Pareto-improving. The qualification of the relative efficiency of different ownership forms *ceteris paribus* seems more hazardous. Following Stark, North and Campbell, we suggest that documenting the diversity of institutions and the factors shaping the direction of institutional trajectories may be more interesting than evaluating their efficiency or interpreting institutional evolution as the emergence of a dominant standard as in technological change[25].

• A general framework of path shaping path dependent evolution of ownership structures

Now that we have exposed the path dependent and path shaping mechanisms of institutional change as we perceive them, we outline our general analytical framework in which they combine to explain the national ownership trajectories. Although they are continuous processes, to make them manageable we will schematise them as sequences of change. For each successive phase we examine the constraining and enabling initial conditions, then we explain the process by of elaboration of the new ownership formal rules, and finally we describe the evolution of the ownership structure proper, determined by the

[24] This theory recognises nonetheless the existence of path dependence, because the costs and benefits associated with institutions depend on existing formal and informal institutions.

[25] Such a position presents similarities with the principles of impurity and dominance developed by Hodgson (1988): he contends that institutions are always diverse, and although one type may be dominant, there are always remnants of other types.

enforcement or manipulation of these rules. We aim to explain the overall trajectory of change as the ongoing result of micro-level path dependent and path shaping processes, having cognitive, political and systemic sources, which all interact in this sequence.

Each phase in the sequence first calls for an examination of the existing constraining and enabling elements, which may be institutional, cognitive or political. The state of ownership institutions and of the general institutional framework is observed to point out probable inertias linked to the institutional matrix (ex. improbability of the development of widely-held companies if capital markets are insufficiently developed to allow for their governance) or to the political context (ex. legacies of enterprise councils in Poland or of managerial autonomy in Hungary), as well as possible enabling or path shaping factors (ex. development of an eventually existing private sector, diffusion of new ideologies, strategies of each group of stakeholders in the ownership transformation process).

The elaboration of the emerging ownership rules, entailing a legislative process of property rights reform and of definition of the privatisation strategy, is then explained as proceeding from the interactions between the constraints and the enabling resources, from the eventual recombination of existing rules, and from compromises reached by interest groups. The new rules[26] display varying path dependent and path shaping features as the different types of constraints do not exert the same influence during all the phases of the process and conversely the margins of path shaping actions vary in time. The content of the new rules may be unintentional (in the sense that they do not correspond to any initial project) because of the unpredictable compromises resulting from the bargaining process.

Finally, the emergence of diverse ownership forms and the evolution of their relative weight is influenced by the new formal rules but unintended developments may also appear at this stage and the resulting ownership structure may differ significantly from what actors expected initially or could expect considering the new rules. The ownership structure transformation is also subject to path dependence and path shaping: agents choose new ownership forms constrained by the formal rules and by the strategies of the other agents but they can try to interpret the rules strategically or may make mistakes because of bounded rationality. A few cautious remarks on the efficiency of the evolving and varied ownership structure can also be suggested. This analysis is then repeated for each successive phase in the sequence of change.

• <u>Is institutional path dependence an alternative to neo-classical institutional theory?</u>

Just as technological path dependence challenged the dominant view on technological evolution, institutional path dependence offers an alternative to the neo-classical conception of institutional change[27]. The latter, represented by new institutional economics (theory of property rights (Demsetz 1967) or the early works of North (1973)), develops a general conception of institutional change as a functionalist efficiency-enhancing change. By contrast, institutional path dependence is an appeal for a genealogical instead of a teleological and functional view of institutional change (David 1994, Stark 1992) where institutions are not explained as efficient rationally created solutions to problems but as the diverse, possibly unintentional and possibly locked-in result of past events and strategic actions.

The relationship between neo-classical economics and path dependence is however more complex as the former does recognise that historical and political constraints weigh on

[26] Due to the specificities of our object, emphasis will be placed on formal ownership rules.

[27] There is also a gap between institutional and technological path dependent approaches, as the first are more critical of neo-classical hypotheses than the second: most tenants of institutional path dependence do not adhere to the belief in the existence and the unicity of an economic equilibrium nor to the possibility of a straightforward evaluation of economic efficiency. In this respect, Dosi (1997) considers that David and Arthur keep several general axioms of neo-classical theory abandoned by evolutionists, such as the idea of a maximising representative agent in a world characterised by equilibria.

institutional change. For instance, some of the early policy recommendations in the transition took political constraints into account and tried to devise a proper sequencing of reforms to overcome them ("the political economy of reform", ex. Roland (1994)). Moreover, as we have seen with Leibowitz and Margolis (1995), some neo-classical economists are ready to discard the efficiency-only motivated view of institutional change and accept that historical developments may also influence institutions and block the creation of Pareto-superior institutions, which is a significant advance compared to Demsetz's (1967) theory of property rights for example.

So the main difference opposing the neo-classical and the path dependent view of institutional change[28] derives from their resulting stance on the possibility of conscious institutional design[29]. Indeed, the increasing popularity of path dependence in transition studies can be rationalised as a reaction to the initial vision of the transition as a straightforward exercise in institutional engineering building on the institutional vacuum left by the collapse of the socialist system, and as an endeavour to cope with the observed coexistence of old and new institutions which the "blueprint" approach to the transition could not accommodate (cf. Federowicz 1997).

II Path dependence and path shaping in the study of ownership trajectories in Central Europe

We now turn to the analysis of the ownership trajectories in Central Europe. We have chosen Poland, Hungary and the Czech Republic because they share relatively similar initial conditions at the beginning of the transition and their evolutions display at the same time common patterns and specific developments. We will strive to apply to each country the analytical framework elaborated above, explaining the initial conditions, the elaboration of formal ownership rules and the change of ownership structure for each phase of the ownership trajectory. The phases are distinguished by different dynamics of the formal rules governing the transformation of ownership structures and/or of the resulting ownership structure. We shall try to show how the ownership trajectories can be interpreted as the resultant of path shaping and path dependent processes and how some characteristics of ownership structures appear unintentionally and influence the subsequent process. We base our study on a large spectrum of economic data, from national statistics on privatisation and ownership forms to empirical case studies or analyses of the political situation. Our analysis of the comparative ownership trajectories is an aspect of our current research and we present here a first exploratory version of a work that is not yet completed and should be understood more as an orientation for future research than as a definite interpretation. Considering this and to simplify the presentation, we have chosen to expose the trajectories as stylised facts without giving precise data nor bibliography references.

1. The Polish ownership trajectory: a strong inertia resulting from political constraints and many unanticipated outcomes

The evolution of the Polish ownership structure can be subdivided into three periods, 1990-1992, 1993-1996, and 1997-2000, differing according to the balance of power and the degree of confrontation between governments and insiders, especially workers, of state-owned firms, leading to a more or less important development of insider ownership.

[28] But the different variants of institutional path dependence display varying degrees of distance with neo-classical economics.

[29] One of Stark's articles is entitled "Not By Design: The Myth of Designer Capitalism in Eastern Europe", in Hausner et al. (1995).

• 1990-1992: radical reorientation of the ownership trajectory in a context of strong political constraints

The elaboration of the ownership transformation strategy in Poland immediately following the demise of the socialist system took place in a context of strong path shaping efforts of the new liberal governments and of the strong political constraint of the inherited role of state enterprise insiders, whence path dependent characteristics of privatisation rules and of ownership forms. At the most general level, the new governments motivated by their faith in liberal economic theory radically reoriented the ownership trajectory by abandoning the supremacy of state ownership and explicitly striving to promote private ownership. Their legitimacy comforted by free elections in 1990 and 1991 and by the aspirations of the population for a capitalist life-style, the new governments were in a strong position to radically modify the rules on ownership forms. But the design of the new ownership trajectory was heavily constrained by the formal and informal property rights acquired by state enterprise insiders following the reforms introducing self-government at the beginning of the 1980s and which had been translated into political clout by the election of representatives of employee councils to the Parliament in 1990.

The confrontation of the conflicting objectives of the government and of state enterprise insiders led to the elaboration of an ownership transformation strategy as a political compromise, codified in the privatisation law of July 1990. The government hoped that capital privatisation (the sale of large firms to foreign and domestic investors through the capital market) would become the dominant privatisation method, leading to the entry of foreign capital and the emergence of efficient ownership structures conductive to restructuring. It also relied on capital privatisations to lock-in the ownership trajectory and prevent successor governments from backtracking in this area[30]. Under the pressure of insiders and after intense political negotiations, the leasing method was also included; allowing insiders to create a new company leasing the assets of the former state firm, but the government considered this as a very secondary method of divestment. The set of formal privatisation rules, which remained virtually untouched until the new privatisation law in 1996, was thus an unintended mix of capital privatisation and leasing.

So in spite of the government's path shaping efforts a certain continuity can be observed in the actual evolution of ownership structures between 1990 and 1992: the dominant privatisation method turned out to be leasing former state firms' assets to employee companies. Employee firms constitute an ownership form building on the legacy of the self-managed state firms as defined by the Polish law on state enterprises of September 1981, but are not exactly similar to the self-managed enterprises since the employee council is dissolved at the time of privatisation, so they can be considered as a kind of institutional recombination of this historical experience and of new elements, such as genuine private ownership of shares and the accompanying corporate governance structures (firm boards, etc.). The ownership trajectory was also characterised by the unanticipated important growth of new private firms, most of them very small but very dynamic. The creation of new private firms came as no surprise to observers, but the scale of the process did. We can conjecture that Polish entrepreneurs built on the economic and cognitive legacies of the important private sector in the last decade of socialism, and benefited from the process of privatisation and liquidation of state firms as it freed a large amount of assets available for new ventures.

The first years of evolution of the Polish ownership structure thus display strong path shaping efforts of the government, which have succeeded concerning the lock-in on a private ownership path but not concerning the favoured privatisation method, and also strong path dependent effects linked to the legacy of self-management and the political influence of state enterprise insiders, which have resulted in the emergence of employee leased companies

[30] In 1990, a soviet intervention or the return of a communist government could not be entirely ruled out.

combining inherited and original characteristics, and in the development of new private firms.

• 1993-1996: inertia of privatisation rules and of the evolution of ownership structures

In the second phase of the Polish ownership trajectory, beginning under the Suchocka government followed by administrations formed of ex-communists after their electoral victory in 1993, the successive governments developed considerable efforts to continue shaping the ownership trajectory. They considered that the privatisation process was unfolding too slowly because insiders had too much control on the privatisation of their firm and the process was too conflictual between the government and the insiders. The elaboration of new privatisation rules met however with considerable resistance from insiders successfully entrenched behind the dispositions of the 1990 privatisation law until 1996. Through political bargaining and compromise, the governments slowly managed to elaborate a Pact on state enterprises, a law on mass privatisation and a new privatisation law.

The elaboration of the Pact on state enterprises represents the government's first attempt to shape the ownership trajectory. Construed as a sort of new social contract, it was designed to reduce the degree of confrontation between the government and insiders by inducing the latter to engage in strategic choices concerning the privatisation of their firm, otherwise the privatisation decision would revert to the government. Although this new governmental attitude raised considerable hopes, the Pact was never fully ratified because of the dissolution of the Parliament in the summer of 1993, so its role as a device to signal that the government's attitude had changed was more important than its actual content.

The second important path shaping endeavour of this period was the vote of the mass privatisation program in April 1993 after several years of political debate. This programme, first suggested as a radical reorganisation of state property under socialism, was actively supported by international institutions such as the World Bank. It provides for the creation of national investment funds who will become shareholders of the privatised firms with a carefully though out ownership structure, and will be themselves acquired by the population through coupons. The project was only accepted when the government granted advantages to these firms' insiders (15% of shares free) and to the parliamentary left (who insisted that participation in this scheme be strictly voluntary and who limited the number of participating firms). Furthermore, the intense political debate on the details of the management of privatised firms by the investment funds and of the funds by management companies led to the crafting of a compromise law containing the seeds of future malfunctions. Not surprisingly, political resistance dragged out in time the implementation of this programme until early 1998.

The last major path shaping action of the government was the elaboration of a new privatisation law finally voted in August 1996, modifying the influence of insiders over privatisation. On one hand, they benefit from greater material advantages (15% of the shares for free instead of 20% at half price according to the first law, and seats on the firm boards are reserved for employees) which can be considered as the legal recognition of the non ratified promises of the Pact. But on the other hand, leasing privatisations are limited to small firms and insiders' control of the process is restricted. Paradoxically, this law has been voted under a social-democrat and not a liberal government, which shows that attitudes to privatisation are more complex than the traditional political cleavage.

But despite important efforts of the governments to influence the ownership trajectory, this period was essentially characterised by the inertia of privatisation methods and of change in ownership forms because of acute political resistances: the Pact was not fully ratified, the implementation of the mass privatisation programme was considerably delayed and its scope was reduced, and the new privatisation law only came into effect in March 1997. Privatisation remained dominated by leasing privatisations and emerging ownership forms by employee companies and new private firms.

• <u>1997-2000: change of privatisation trajectory and relative inertia of ownership structures</u>

The inflexion in the privatisation policy, begun by the last social-democrat government and amplified by the right-and-centre coalition governments after the 1997 elections, can be interpreted as a change in the privatisation trajectory, related to a change in several political and economic conditions. The governments' new conceptions concerning privatisation can be interpreted as a new underlying "paradigm" of ownership transformation: privatisation is no longer seen as an element of the transformation process but as a prerequisite for European Union accession and for economic modernisation; the Buzek government, with Balcerowicz as finance minister, also has a new strong preference against state subsidies to industrial firms, and a political and ideological commitment to the completion of the privatisation process. The desire to terminate privatisation in the remaining sectors to comply with EU instructions reflects at the same time that the UE provides a cognitive reference for Polish reformers, and that it has become a powerful constraint shaping economic policy. It seems that this has pushed the Buzek government to invert its predecessors' appreciation of the relative weight of the constraints resulting from EU instructions and from the political influence of entrenched lobbies in sensitive sectors: it has preferred to overcome the lobbies' resistance, paying a high price in public spending, in order to fulfil EU requirements. Finally, the design of a new privatisation policy can also be considered as a response to the rising needs in fiscal revenue which the preceding privatisation path could not meet: the stock of firms to be privatised in the traditional sectors and the revenues they could bring were steadily diminishing.

The new privatisation trajectory rests on the modification of privatisation rules to extend the process to sectors previously excluded from privatisation: infrastructures, energy, the financial sector, and traditionally sensitive sectors (mining, metallurgy). The qualitative nature of the privatisation process is therefore evolving: the yearly number of privatised firms is declining but privatisation revenues are higher than ever (the 2000 privatisation revenues are greater than the cumulated revenues between 1990 and 1998).

The reorientation of the privatisation strategy has a bearing on the ownership structure but does not overcome all path dependent effects and does not avoid the emergence of unanticipated effects. Foreign investors are now the main acquirers of privatised firms and the share of foreign ownership is increasing, although in these transactions Polish smallholders buy a part of the shares on the financial markets. However, this new privatisation trajectory still displays a certain continuity with the previous one, as shown by the fact that the Parliament examined an amendment to the 1996 privatisation law aiming to allow once again the privatisation of large firms through leasing. This supports the idea that for non-strategic firms, decentralisation, insiders advantages and co-operation between insiders and the future investors are essential to maintain the pace of privatisation, as insiders can still slow it down. Finally, this last period is characterised by the emergence of unanticipated difficulties in the mass privatisation programme due to the conflict over the interpretation of the investment funds' mission. The funds' management companies take a short-term view of the performance of their portfolio firms and are inclined to sell non-performing firms, whereas the funds' supervisory boards see the funds as industrial holdings aiming to actively restructure the portfolio firms. This divergence is possible because both entities face differing incentive structures and because due to political bargaining during the elaboration of the programme, its final phrasing is ambiguous and does not clearly define the funds' nature which remains hybrid, in between collective investment vehicles and venture capital funds. This shows the limits of a heavily engineered programme, paradoxically aiming to avoid the difficulties encountered in the Czech Republic related to insufficient regulation.

This rapid presentation of the ownership trajectory in Poland shows how the general privatisation rules have been extremely difficult to modify and relatively constant in time because of the entrenchment of the various interest groups. So the process has been strongly path dependent in spite of numerous path shaping efforts; it has also witnessed several major unanticipated developments. Finally, notwithstanding the recent acceleration of privatisations, it seems clear that new private firms increasingly dominate the ownership structure, and that apart from a few large strategic companies, the privatised sector will soon become insignificant within the private sector. This frees Poland from a certain path dependence on its socialist past, but the development of the new private sector was itself influenced by the divestment of state assets through privatisation, whence another source of path dependence.

<u>2. The Hungarian ownership trajectory: the unsuccessful attempt of insiders and Hungarians to counterbalance the emergence of foreign ownership?</u>

We distinguish three phases in the Hungarian ownership trajectory: 1990-1992, 1993-1994 and 1995-2000, which are characterised by an alternating emphasis on foreign and domestic, including insider, ownership within the overall privatisation strategy.

<u>• 1990-1992: the pragmatic and partially path dependent elaboration of the Hungarian ownership transformation strategy</u>

The first phase of the Hungarian ownership trajectory opened in 1990 with the change of political and economic system and the commitment of the newly elected government to the development of private ownership. It was influenced by the changes that had already begun in the last years of the communist regime: managers of state-owned firms used the new law on economic activity (1988) to spin off assets of their firms by creating limited liability companies which they partly or wholly controlled, leading to the unintended emergence of cross-ownership between state firms and these new "satellite" companies (Stark 1996), often linked with state-owned banks, in a process called "spontaneous privatisation". In 1990, these reorganised state firms escaped the government's control to a large extent. The elaboration of the Hungarian ownership transformation strategy was also constrained by the high level of foreign debt that Hungary wished to honour to maintain the interest of foreign investors, present since the law allowing joint ventures in 1972. Finally, to the difference of Poland and the Czech Republic, a real economic debate on ownership reform had taken place in Hungary in the last years of socialism, so in 1990 a consensus had already emerged on the necessity of privatising through sales and on the preferable avoidance of mass give-away schemes.

The Hungarian privatisation strategy incorporated two major path shaping choices: it emphasised the sale of state firms, preferably to foreign investors, and it centralised the process by the creation of a State property agency (SPA) to supervise it, as a reaction against the uncontrolled spontaneous privatisations of 1988-1990. Although the government was under domestic and international pressure to privatise rapidly, it initially favoured privatisation revenues over speed. This general approach was however very pragmatic: the privatisation law, the first global document concerning the privatisation process, was only voted in 1992, and the degree of centralisation of privatisation transactions has fluctuated. Their progressive decentralisation as from end-1991 with the implementation of the self-privatisation method for example according to which the SPA licensed consulting firms who then monitored privatisation transactions independently of the SPA, can be considered as a form of path dependence of the privatisation methods. Indeed, the important autonomy enjoyed by managers of state firms inherited from the decentralising reforms of the late 1960s and from spontaneous privatisations enabled them to delay the privatisation of their firm; to accelerate the process the government had no other choice but to lessen the degree of centralisation. The failure of the first active privatisation programmes (state-organised centralised sales) is also a sign path dependence: this method was inadequate relative to the state of development of capital markets and of the economy in general.

In this first phase, the privatisation process unfolded more slowly than the government's initial plans and the emerging new private owners were predominantly foreign, which testifies that the government had convinced the population, at least for the time being, that foreign capital was essential for the country's transformation. A very limited amount of insider ownership appeared, following the few advantages granted to them (preferential shares in the self-privatisation process). The development of cross-ownership through the creation of spin-off companies with state firm assets seems to have continued during this phase, leading to a further complexification of the ownership structure of state firms and illustrating the government's incapacity to overcome this path dependent legacy so far. Finally, there has been an important development of new private firms, either by legalisation of former second economy activities, either by founding of genuinely new businesses.

The changed attitude towards private ownership and the important increase of foreign ownership favoured by the government constituted rather radical changes, but on the whole elements of continuity with the previous decade could also be observed with the continuing development of cross-ownership and the inability of the government to durably centralise the privatisation process because of insiders' bargaining power. The participation of foreign investors in the Hungarian privatisations was also a path dependent process to a certain extent as many of the transactions built on relations established in the previous era.

• 1993-1994: introduction of preferential privatisation methods and development of Hungarian and insider ownership

After the first two years of transformation, the Hungarian population began to resent the scale of foreign investments and the lack of transparency of the sales, and accused the government, whose popularity steeply declined, of selling off state-owned firms below their value. Furthermore, foreign interest in Hungarian firms decreased because of the complexity of the transactions and because the more attractive firms had been sold off first.

The government responded to these changing conditions by modifying its trade-offs between foreign and domestic private ownership and between speed and privatisation revenues. New privatisation methods were introduced at the same time than the first privatisation law in the middle of 1992. Preferential payment methods were granted to domestic investors through low cost credit (existence loans) and leasing schemes, and the law on employee stock-ownership plans (ESOPs) encouraged insiders to buy-out their firm. Also, the bargaining power of public sector managers *vis-à-vis* the SPA had diminished because the government had replaced a large number of them by men of the main governing party, so it was able to impose the "commercialisation" of all state firms (transformation into commercial companies) implying greater state control, which it had been unable to implement in 1990. We interpret the replacement of managers as a successful path shaping action allowing the government to eventually overcome the inherited constraint of manager control over privatisation. Finally, faced with the unexpected challenge of managing a large number of state firms due to the slow pace of privatisation, a new state agency was created to manage long term state assets.

Significant changes in the ownership structure were observed in this period. Thanks to the preferential methods favouring Hungarians, between end 1992 and 1994, the relative weight of foreigners and Hungarians in the new private owners was inverted as shown by the proportions in privatisation revenues between foreign currencies and forints and between cash and preferential payment methods. Moreover, the cross-ownership links inherited from the evolutions of 1988-1992 underwent conflicting evolutions. On one hand, the government-sponsored debt consolidation programmes of 1992 and 1993 aiming to reduce interentreprise debts induced banks to engage in debt equity swaps with indebted firms, increasing the degree of cross-ownership. On the other hand, banks became wary of cross-ownership and deliberately sold some of their industrial participations, while the government involuntarily reduced cross-ownership through bank recapitalisations which increased the state's share and mechanically diminished that of other shareholders, and finally some firms belonging to a web of cross-ownership relations went bankrupt, reducing the overall scale of the phenomenon.

The Hungarian ownership trajectory thus encountered a phase of resistance to the government's general preference for foreign ownership from the population and state firm insiders. Domestic investors influenced momentarily the privatisation methods in a path shaping and path dependent way at the same time: they pushed the government to modify its priorities and the formal privatisation rules but this oriented the ownership trajectory in a direction determined by the path dependent influence of insiders on state-owned enterprises. The evolution of cross-ownership was also complex and a mix of deliberate and unintentional mechanisms explained its slow overall resorption.

<u>• 1995-2000: change of privatisation trajectory and renewed increase in foreign and domestic outsider ownership</u>

Following the formation of a new coalition government between socialists and liberals in 1994, the Hungarian ownership trajectory underwent a significant reorientation. This government benefited from a more comfortable parliamentary majority than its predecessor and was more strongly constrained by the growing budget deficit and by the austerity measures of the "Bokros package". This allowed paradoxically a predominantly socialist government to defeat the resistance of industrial lobbies which had so far successfully prevented the privatisation of strategic sectors in infrastructure (energy, telecommunications…) and thus to extend the field of privatisation.

As in the Polish case, the privatisation trajectory was modified to respond to the fiscal challenge and to the government's new outlook on the dividing line between the public and private sectors. This allowed it to arbitrage in favour of privatisation of infrastructures as opposed to their remaining state-owned for reasons of political support from their insiders[31]. The new privatisation law of 1995 thus introduced a list of strategic enterprises excluded from privatisation, opening the way for the privatisation of all the others. It also reduced the scope of preferential payment methods for domestic investors (except for compensation bonds distributed to Hungarians as a means of restitution) and decentralised once again the privatisation of small and medium sized firms. Finally, the SPA and the agency managing long term state assets were merged to simplify the management of state assets.

As a consequence, privatisation accelerated significantly in 1995 and then again in 1997 as the government sold gas and electricity distribution companies, power plants, the national oil company, the telecommunications operator[32], banks and other large firms. As from 1998, privatisation has been drawing to a close and the general pace has slowed down. These important transactions increased the share of foreign capital in the Hungarian economy, and it can be noted that foreign investors were more and more often institutional as opposed to strategic. Also, although this is difficult to measure statistically, foreign investments are increasingly realised through greenfield ventures or through mergers and acquisitions of already privatised (or newly private) firms than by privatisation, since privatisation is slowing down. In the meantime, the development of insider ownership has decreased and no longer leads to the emergence of insider dominated firms, all the more as the firms being privatised are now of a relatively important size. Insiders have continued to acquire shares in their firms when they were privatised by sale, but only minority participations, and these were considered more as a bonus and a source of revenue than as an instrument of control over the firm. The relative weight of insider ownership has also diminished because existing insider-owned firms have been frequently bought back by outsiders. Domestic ownership progressed

[31] The reason for the change in this trade-off is however related mostly to fiscal questions in Hungary, whereas the European pressure played an important role in Poland, as this change occurred a few years later and the question of accession had become more important.

[32] Matav had already been partially privatised in 1993, and a majority share is sold in 1995.

during this phase, especially since 1997[33], and was helped to a small extent by the use of compensation bonds as a means of payment. Overall, with the decline of generally dispersed insider ownership, the progressive elimination of cross-ownership and the emphasis on sales to foreigners, the ownership of firms is more and more concentrated (Toth 1997, Voszka 2000).

This quick overview of the evolution of the Hungarian ownership structure reveals an alternating emphasis on foreign and domestic, partially insider, ownership. We can interpret this as a conflict between two path dependent legacies of the socialist system, the autonomy obtained by insiders of state-owned firms, and the ties forged with foreign investors as early as the 1970s. The first post-socialist government more or less clearly favoured the development of foreign ownership and although this turned out to be one the main trends of ownership transformation this trajectory was not locked-in from the start as domestic investors, employees and managers succeeded in tipping the balance back in their favour in 1993-1994. So the path dependent influence of insiders was overcome but not at the first try. We also suggest that the declining importance of insider ownership as well as the progressive disappearance of cross-ownership can be attributed to a slow shift from a mainly political selection of ownership forms to a mainly market selection, whence the replacement of some ownership forms by more performing ones.

3. The Czech ownership trajectory: the path shaping and unintended effects of mass privatisation

The Czech ownership trajectory is determined to a considerable extent by the developments of the mass privatisation programme. Its three main phases, 1990-1994, 1995-1998 and 1998-2000, are defined in relation to the changes in the role of privatisation funds in the ownership structure.

• 1990-1994: path shaping efforts of the government and implementation of a radically new mass privatisation programme

The Czech Republic started its transformation process in slightly different conditions than Poland and Hungary: its macro-economic situation was more balanced and insiders had very little bargaining power because of the limited extent of reform of the socialist system before 1990, so the government faced lesser economic and political constraints. The new government led by Klaus also benefited from a strong legitimacy and popular support, and thus it disposed of a relatively free hand in the design of the privatisation strategy.

The government was therefore able to launch an innovating mass privatisation programme involving the free distribution to citizens of coupons to be exchanged in two waves against the privatised firms' shares or shares in privatisation funds. The programme encountered practically no political resistance and was welcomed by state firm managers as they anticipated it would lead to dispersed ownership leaving them in control of the firm. The programme assigned two contradictory objectives to the privatisation funds: they were meant to acquire important shareholdings to be able to restructure their portfolio firms and at the same time it was hoped that their shareholdings would be small enough to reduce the risks for small investors and induce the population to participate. The 20% limit imposed on their shareholdings in the same firm illustrates this ambiguity: it allows for significantly higher participations in firms than Western investment funds, usually limited to 5%, but also expresses a concern for portfolio diversification. Coupon privatisation was initially meant to be only one method among many others (direct sales, tenders, etc.) and the creation of the privatisation funds was left to private agents. The government's intention was to shape the ownership trajectory with this programme by triggering an initial change, which would then

[33] Privatisation revenues in forints were greater than revenues in foreign currencies in 1998.

be followed by an evolutionary process, but not to create an optimal ownership structure right away. The path shaping strategies of non-governmental actors also influenced the process in a determinant fashion as state banks and private (mainly non-financial) firms made use of the possibility of creating privatisation funds far beyond the expectations of the government.

Several major unintended developments concerning the ownership structure arose from the implementation of the mass privatisation programme. First, coupon privatisation became the main privatisation method to the detriment of direct sales. This was to a large extent because of path shaping choices of state firm managers and of the privatisation ministry: the latter chose the privatisation method of each firm on the basis of competitive privatisation plans and it approved of a majority of plans elaborated by managers, who favoured coupons. Second, an unexpectedly large number of privatisation funds were created and they unexpectedly collected the majority of coupons distributed to the population, becoming almost overnight new major shareholders of an important part of the Czech industry. Although each fund usually held small shareholdings in many different firms, it could control them by co-ordinating with other funds. Finally, the creation of privatisation funds by state banks[34] currently being privatised by coupons led to the emergence of wide-scale cross-ownership as funds acquired shares of their parent banks. So there emerged large financial-industrial groups, especially around bank-founded privatisation funds. Furthermore, as mass privatisation was reserved to Czech citizens, foreign ownership did not increase much in this phase apart from a few large operations like the purchase of Skoda by Volkswagen. The ownership structure also changed due to the privatisation by auction of small businesses.

The elaboration of the Czech strategy of ownership transformation thus includes a significant amount of path shaping choices by the government, but also by banks, private non-financial firms, and firm managers, so the process significantly differed from the original plans. The unanticipated developments led to the emergence and lock-in of a complex and inefficient ownership structure, which exercised path dependent effects on the next phases.

• 1995-1998: the struggle around the concentration of ownership structures following mass privatisation

As expected, the ownership structure of privatised firms evolved after the end of mass privatisation, but in an unanticipated manner. This process, called "the third wave" of mass privatisation, occurred in conditions of very limited transparency and of lax regulation, and funds engaged in more or less fraudulent operations. The contradiction in the funds' hybrid nature became obvious and some funds attempted to resolve it by transforming into holdings.

All privatisation funds sought to consolidate their very dispersed portfolios to increase their control on firms, and due to insufficient regulation of capital markets and to the government's passivity in this regard because of its commitment to liberalism, they did so in a highly dysfunctional way. First, as they could easily disregard the rights of minority shareholders, minority participations became worthless and all funds sought to accumulate majority participations. But the resulting sales and exchanges of blocks of shares generally did not respect transparency and fairness conditions, and most funds openly disregarded the 20% participation limit. Second, funds hardly restructured their portfolio firms at all because they were faced with perverse incentives: the gains from decapitalising the firms ("tunneling"), were higher than the gains from active restructuring. Also, bank-founded funds faced conflicting objectives as the banks were at the same time shareholders and creditors of the firms, and banks often renewed credits to the detriment of restructuring. Finally, the difficulties of the funds' own governance amplified all these problems: the dispersion of shareholders hampered the monitoring of the funds, and the market's illiquidity and the closed-end nature of some of the funds severely limited the possibility to influence them by

[34] The structure was actually more complex because banks created investment companies who then founded privatisation funds.

selling their shares. To some extent, all these malfunctions can be interpreted as path dependent decreasing returns in the institutional matrix, as the rules governing financial markets, banking activity, and corporate governance of firms all combined to give perverse incentives to privatisation funds.

Faced with this situation, the government preferred to let market mechanisms operate, however imperfectly, instead of interfering. A few amendments voted in 1996 to the securities and privatisation funds laws tried to improve the functioning of capital markets but they were insufficient, and the creation of a securities and exchange commission was discussed at length but it was not created until 1998. In the meantime, bank-founded funds and privately founded funds were actively engaged in a struggle to increase their control on privatised firms. Private funds devised an active strategy to counterbalance the influence of financial funds on the ownership structure by transforming into holdings. This enabled them to avoid investment fund regulations on investment limits and obligations related to majority blocks acquisitions and information transparency (reinforced by the 1996 amendments). Financial funds did not adopt this strategy which reduced their liquidity, curbed their capacity to attract investors and tended to discredit them, because they were still linked to big partially public banks who could not afford to jeopardise their reputation. Finally, managers of privatised firms convinced the Parliament to propose an amendment preventing fund representatives from having seats on firm boards to try to block them from taking control of their firms.

The transformation of most private funds into holdings in the first half of 1996 concerned about a fourth of all shares collected by funds and increased the concentration of the ownership structure as holdings created strong groups balancing to a certain extent the power of the bank-led groups. Their efficiency was doubtful as they seem to have been recreated along the lines of the socialist combinates and firm restructuring has not progressed much. Since holdings acquired majority shares, they were protected to a certain extent from the failures of financial markets, but this only increased the market's illiquidity and the non-respect of minority shareholder rights. They also seem to have continued their irregular activities, as illustrated by the very high discounts of their shares (up to 80%). The Czech population decried these transformations perceived as manipulations to the detriment of privatisation funds shareholders but the government reacted only belatedly in 1998 with a law forbidding the transformation. It obviously underestimated the population's concern, probably because it still hoped that holdings would restructure their portfolio firms. This attitude contributes to explaining the government's fall in December 1997. The unexpected manner of ownership concentration following mass privatisation, leading to a lock-in of dysfunctional capital markets, was therefore deliberately modified in the next phase by the new government.

<u>• 1998-2000: reaction of the government to the malfunctions of privatisation funds and change of the privatisation trajectory</u>

The caretaker government led by Tosovsky in 1997-98 had several incentives to tackle this situation. First, it was subjected to pressure from the Czech public opinion to improve transparency on financial markets. It was also dedicated to harmonising financial market regulations with European Union directives in the view of accession. Finally, it considered that disentangling the ownership structure resulting from mass privatisation was a prerequisite to overcome the economic crisis that the country had entered in 1997.

The Tosovsky government thus broke with the passivity of the Klaus administration by introducing significant measures in 1998. It resolved the contradictions of the hybrid nature of funds by choosing to transform them progressively into more standard collective investment vehicles. Thus in 1998 a new law on investment funds lowered the investment limit in a firm from 20% to 11% and imposed the opening of closed-end funds by the end of 2002 to improve their governance. These measures were reinforced by the operation of the securities and exchange commission beginning in April 1998. The government thus adopted the opposite strategy from that of private funds transformed into holdings. It seems that by 1998, the government had finally revised its trade-off between ownership concentration and restructuring by funds, and transparency and liquidity of capital markets. Moreover, the privatisation and investment funds sector has followed the government's lead by creating a private professional association to supervise funds. Finally, the overall privatisation trajectory changed as from 1998: with the beginning of the improvement of capital markets, the government was able to launch sales of large strategic firms to foreign investors, as had been done earlier in Hungary and Poland.

This decisive choice on the nature of privatisation funds has had an important impact on the ownership structure. In order to respect the new 11% investment limit and to have sufficiently liquid portfolios to be able to transform into open-end funds, privatisation funds have sold off large blocks of shares of firms. This has enabled many firms to find Czech and sometimes foreign strategic owners. The influence of mass privatisation on funds' portfolios and on Czech firms' ownership structure is progressively disappearing, and the groups created around privatisation funds no longer dominate the Czech ownership structure. The best illustration of this is that the new government elected in 1998 has sold most of the public banks to foreigners, which it would not have done if they still indirectly controlled major portions of the Czech economy. More ordinary concentrated private non-financial ownership of firms is thus replacing the typically Czech cross-ownership structure. Firm restructuring now depends on the actions of the strategic owners. As for privatisation funds, joined by investment funds created after mass privatisation, they resemble more and more their Western counterparts from the point of view of regulation and portfolio composition. Their ability to function as collective investment vehicles depends on the continuing improvement of the capital market, as they cannot influence indirectly the management of their portfolio firms by selling their shares if the market is not liquid enough or if the information is still too imperfect.

The Czech ownership trajectory was characterised by the important and unintended consequences of mass privatisations, related to the hybrid nature of privatisation funds and to regulation insufficiencies, creating a perverse institutional matrix. Market mechanisms could not eliminate these inefficiencies, as they have eliminated some developments in Poland and Hungary, because the general institutional framework was insufficient to allow for a good functioning of markets. So these spontaneous developments were eventually overcome by path shaping actions of the government, and privatisation fund ownership will have proved to be a transitory phase in the evolution of ownership structures but not in the sense initially anticipated: their main contribution was finally to sell blocks to strategic owners in 1998 and 1999.

This tentative analysis of ownership trajectories in Central Europe in terms of path dependence and path shaping to helps to understand the evolving state of ownership structures which cannot be explained simply as the rational design of institutional rules. Path dependent constraints offer an explanation of switches or reversals of ownership trajectories, such as the development of domestic and insider ownership in Hungary in 1992-1994, and of certain "surprises" such as the scale of employee ownership in Poland in 1990-1996. Path dependence and increasing returns can also account for the emergence of a perverse self-reinforcing Czech institutional framework in 1995-1998. Furthermore, the cross-country comparison underlines one way in which path dependence can be overcome: through the change in the relative weight of different constraints, often linked to the emergence of a stronger constraint than the inherited one, be it external (ex. the requirements of EU accession) or internal (ex. increasing budget deficit). This applies for example to the extension of privatisation to strategic sectors in all three countries, and to the reduction of the role of insiders in privatisation rules in Poland. The comparison also illustrates how overcoming path dependence does not always succeed at the first try. Finally, although it reveals specific national institutional configurations, general similarities between countries confirm our intuition on the relevance of the comparison. According to specific national forms and temporalities, in each country we have observed a first more or less radical phase of change, followed by the modification of the ownership trajectory either by the re-emergence of path dependent constraints (Hungary, Poland), either by the emergence of a new institutional dynamic resulting from the first phase (Czech Republic), followed in turn in all three countries by a net reorientation of the ownership trajectory towards the sale of large industrial and strategic firms, to foreign investors in a large part, this reorientation being more radical in Poland and in the Czech Republic than in Hungary where this type of evolution had already been observed in the first phase.

Conclusion

We consider that the main contribution of the path dependence literature is to take into account the dialectics of path dependent and path shaping effects instead of considering institutional change as a smooth exercise in institutional design aiming to improve Pareto efficiency. We hope to have shown that path dependence is a highly relevant concept for the analysis of ownership trajectories in Central Europe, providing it is clearly defined and the underlying mechanisms implied are specified, as we have tried to do in our analytical framework applied to Poland, Hungary and the Czech Republic, although the framework is perfectible and the national ownership trajectories only constitute explorations as yet.

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