Path Dependence, Corporate Governance and Complementarity

Reinhard H. Schmidt and Gerald Spindler*

University of Frankfurt and University of Göttingen.

Abstract

The concept of path dependence can be used to challenge the widespread view that the corporate governance systems of the major advanced economies are likely to converge towards the economically best system at a rapid pace. This paper argues that it is important for the discussion of path dependence and corporate governance to distinguish clearly between two arguments that can explain path dependence: one based on the role of adjustment costs, and the other using concepts borrowed from evolutionary biology. Making this distinction is important because the two concepts of path dependence have different implications for the issue of rapid convergence to the best corporate governance system. The authors introduce the concept of complementarity as a reason for path dependence and demonstrate that national corporate governance systems are usefully regarded as – possibly consistent – systems of complementary elements. The dynamic properties of systems composed of complementary elements are such that

*The authors are Professor of International Banking and Finance at the University of Frankfurt and Professor of Law at the University of Göttingen, respectively. Address correspondence to the first author at Goethe-University, 60325 Frankfurt/Main, Mertonstr. 17, Germany, e-mail rschmidt@wiwi.uni-frankfurt.de. The authors are grateful to Benn Steil, the editor; to one of the referees for his or her encouragement; and to the second referee for a host of comments and suggestions which helped greatly to improve the exposition.
a rapid convergence towards a universally best corporate governance systems is not likely to happen. More importantly, though, there is even the possibility of a convergence towards a common system that is economically inferior. Especially in the case of European integration, ‘inefficient convergence’ of corporate governance systems is a real possibility.

I. Introduction

There are essentially three overriding substantive themes that shape the international academic debate on national corporate governance systems:

1. What constitutes a good, or workable, or efficient, corporate governance system?
2. Which of the prototypes of corporate governance systems that we know is economically more efficient, or simply better?
3. Is there a tendency towards a convergence of the different national corporate governance systems and, if so, where does this convergence lead, and can it be expected to be rapid and relatively smooth?

Behind these substantive issues lies the methodological issue of how one can usefully describe and analyse corporate governance systems.

One starting point for a discussion of both the substantive and methodological issues of the development of national corporate governance systems is the work of the well-known law and economics scholar Mark Roe, though the issue of how national governance systems develop is a general one. In his book, *Strong Managers, Weak Owners*, Roe (1994) had demonstrated that institutional features as observed today are shaped by historical events and these may, from today’s perspective, appear to be accidental in nature and thus may have caused institutions to appear inefficient. The general lesson is that history and politics matter, and that they matter more than purely economic or efficiency-related considerations would suggest. The phenomenon described there can be called path dependence. Linking path dependence with economic efficiency provides a theoretical basis for the mainly empirical accounts in Roe’s book.¹

The notion of path dependence serves to challenge the predominant view among economists and law and economics scholars, namely that, under the pressure of globalization, the corporate governance systems of the major industrial countries are likely to converge rapidly.²

¹See Bebchuk and Roe (1998, 1999) for first attempts along this line.

²Most authors also consider the Anglo-Saxon model of corporate governance to be the best one and, therefore, expect rapid convergence towards this model. As an example from the academic
The rejection of the conventional view that globalization leads to rapid convergence seems plausible. With the important proviso that there are ‘limits of persistence’ of what might be inefficient institutional arrangements such as a specific national corporate governance system (Bebchuk and Roe 1999, p. 147), many observers would probably be inclined to accept the proposition that convergence might be slow and incomplete.

We also find the notion of path dependence highly plausible, and concur with the view that convergence towards the best corporate governance system is not likely to happen soon. However, this may not be the only implications of path dependence, and it might not be the most important one. In this paper, we argue that there is a need to rethink and to strengthen the economic foundations of path dependence. For this purpose, we propose to use the concept of complementarity. Complementarity is a characteristic feature of corporate governance systems. Using complementarity as the main reason for path dependence leaves unaltered the implication that convergence is not likely to be fast. It also suggests, though, that there is the possibility of a convergence of formerly different national corporate governance systems towards a common system that is not necessarily the economically most favourable one.

In this paper, we first discuss the conceptual underpinnings of path dependence found in much of the relevant literature. This serves the purpose of showing that the consequences of path dependence are determined in an essential way by the factors that lead to path dependence in the first place. We then argue that the concept of path dependence has to be supplemented and supported by complementarity, a theoretical concept so far not discussed at sufficient length in the literature on corporate governance systems. In Section IV, we show that complementarity is crucial for understanding the dynamic properties of corporate governance systems and that, if complementarity is indeed the main path dependence, increasing efficiency pressure may even lead to a convergence towards an inefficient system.

world, see Hansmann and Kraakman (2001) with reference to corporate governance. Referring to the entire financial system, Rajan and Zingales (1999) make the same point. A great many statements of a similar nature can be found in the popular press; see, for example, Roche (2000) and The Economist (2000).

More generally, complementarity is crucial for understanding the characteristics and the dynamic properties of entire legal systems, financial systems and other similarly complex systems. For legal systems, see Spindler (1993) and, for financial systems, see Hackethal and Tyrell (1998) and Hackethal and Schmidt (2000). The fields in which complementarity has first been recognized as important include corporate structures and strategies (Milgrom and Roberts 1990, 1992, 1995a; Porter 1996).
II. Two Explanations of Path Dependence

The concept of path dependence is invoked when we observe facts, especially institutional arrangements, which differ from those one would expect to exist under the sole influence of efficiency. Thus, the definition of path dependence uses a conventional notion of economic efficiency as a standard of reference. The notion of efficiency is closely related to that of equilibrium. In standard economic theory, the equilibrium is also the economically efficient situation, and vice versa. Disequilibrium is assumed to lead to adjustments until an equilibrium is reached. Thus, the standard efficiency concept suggests a dynamic dimension, namely that of a change or convergence from a given inefficient institutional arrangement to an efficient – or simply the best – one.

Economic theorizing that uses the concept of path dependence makes the implicit dynamic dimension explicit. It discusses the adjustment process, and it treats it as being, in some respects, imperfect. Within the standard framework of economic theory, this cannot be done. Therefore, work on path dependence typically adds some unconventional assumption – such as bounded rationality or imperfect and incomplete markets – and contracts to the standard economic approach. These unconventional elements, which are typically considered as realistic, can be regarded as the causes of path dependence. This suggests taking a closer look at the nature and the causes of the failure to reach an economically efficient situation or, in other words, at the nature and the causes of path dependence.

A. Path Dependence as a Consequence of Switching Costs

The central argument for path dependence goes like this: factors determining efficient institutional arrangements change over time. Therefore, a once efficient arrangement becomes inefficient from today’s perspective. However, given that the possible efficiency or welfare gain brought about by changing an institutional arrangement may not be sufficient to cover the costs of adjustment, ‘society’ might rationally keep the seemingly inefficient institutions.4 So, in spite of the initial appearance, what we observe in reality may be efficient in a broader sense, namely with the adjustment or switching costs being taken into account.

Note that, in this account of why path dependence can occur, there is nothing to prevent the reader from interpreting ‘society’ as a single rational, efficiency-oriented decision-making unit. Therefore, similar considerations also apply to the production technology employed in a firm or the energy

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4See Roe (1996), with further references and a very instructive example on pp. 641–3.
conservation devices used in a private home, which may appear inefficient today. Details of how the production plant or the home were originally built determine which improvements may have been advisable in the meantime and thus, ultimately, also how the plant or the home look today. There can be no doubt, that adjustment or switching costs are a fact of life, and that they ‘matter’. We call the first account of what causes path dependence the switching cost argument.

As it is normally presented, the switching cost argument suggests that the adjustment or switching costs that lead to path dependence are mainly a technical fact. However, switching costs are not, by definition, technical in nature. There is a difference between the technical and the social aspects of institutional development, and many accounts, including that presented by Roe (1996) tend to obscure this difference. A simple technology-based explanation of path dependence is not enough when the decision as to whether to switch from an existing institutional arrangement to a better one is not made by one single economic unit. In social or political processes, switching costs – and thus path dependence – can arise as a consequence of, among other things, sunk costs, entrenched property and decision rights of interest groups and network externalities. Thus, whether an improvement in efficiency or welfare comes about depends crucially on the details of the relevant processes.

B. Path Dependence as a Consequence of Evolutionary Myopia

There is a second explanation of path dependence. It is based on recent developments in evolutionary biology.5 The main proposition here is that evolution leads systems – or collections of ‘agents’ striving for an improvement of their situation – only to local optima. By definition, a local optimum may be different from a global optimum. What constitutes the nearest, and seemingly most attractive, local optimum depends on the starting point at which a given biological or social system happens to be at a given point in time. This is why history matters or, in other words, why the development of systems is path dependent. All that is needed for the biologists’ story to be convincing is the assumption of a certain degree of myopia on the part of the entities that are assumed to behave as if they made rational choices under external pressure to adjust. ‘Modern evolutionary biologists use the metaphor of natural selection leading us to the top of a local hill.’6 We therefore call this explanation of

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5See Roe (1996) and the references provided therein.


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path dependence the *local hill argument*. Note that evolutionary mechanisms that may lead to path dependence can be assumed to work, even in the absence of all switching costs, as long as these are not defined to include all consequences of myopia.

C. Comparing the Two Explanations

Even though the two explanations of path dependence may not be mutually exclusive, we think that it is important to distinguish between them as they shed light on different facts and suggest different implications. This becomes most obvious when we look at an important corollary of path dependence. As mentioned before, there are reasons to expect that ‘large’ inefficiency limits the persistence of institutional arrangements that are no longer up to date (Bebchuk and Roe 1998, p. 27; 1999, p. 147). This amounts to saying that, as long as the external pressure is not too strong, different institutional arrangements such as different types of governance systems, may coexist side by side even though they differ with respect to the efficiency with which they fulfil the *same* function. However, when the pressure becomes too strong, path dependence does not seem to count so much any more, and only the more efficient arrangement survives.

Such a view, which is in line with established views in economics, would be consistent with the switching costs argument: the more that can be gained from undertaking certain improvements and the more that would be lost by forgoing them, the more improvements will be undertaken by rational agents, be they individuals or society acting as if it were a single individual. Strong pressure might even force the decision makers to adopt the global optimum, provided that the cost of switching to it is not too high. If more pressure leads to more adjustment and if that pressure is applied equally to different systems, it ultimately also leads to more convergence, provided that the same institutional arrangement is perceived by all agents who make the decisions under consideration to be the global optimum.

In the light of the argument taken from evolutionary biology, this view is much less plausible. Here, sudden outside pressure leads, in the first place, to reactions which appear to short-sighted decision makers\(^7\) to offer the highest potential to solve the *acute* problem. Assume there is a firm which has various options to improve the efficiency of its operations and that, all of a sudden, the intensity of competition increases; a ‘globalization shock’ hits this firm. To

\(^7\)Note the metaphorical character of this sentence: in biological evolution, there are no ‘decision makers’; instead, some entities act in a way that we interpret as if it involved rational choices on their part.
survive, the firm needs to do something helpful, and needs to do it quickly, to avoid a crisis. If the reaction has to be fast and is myopic it may lead the firm to a local optimum, which is not a global optimum. Attempts to leave the local optimum to attain – or more precisely, to search for – a global optimum may simply not be feasible if the firm does not have enough financial reserves to survive the losses which it will incur in the process of transition. Thus, the evolution of this firm will turn out to be path dependent.

What does this imply for convergence? If several such firms are hit by the same ‘globalization shock’, they will all attempt to improve their situation and undertake some efficiency-enhancing measures, each one using the option which offers the best immediate or short-term prospect. If they are in different starting positions when the event occurs, the different firms may end up at different local optima and might be stuck there. In fact, stronger outside pressure will decrease the likelihood that convergence will occur because, with very strong pressure, the danger that temporary deviations from a local optimum would lead to losses and the eventual failure of a firm are greater. Not more, but less outside pressure would make it easier for the individual firms to experiment and accidentally move to the global optimum and thus to converge. Convergence does not occur if strong outside pressure prevents them from experimenting and perhaps finding the common global optimum.8

We do not want to speculate on whether the switching costs argument is less useful and relevant than that of the local hill in general. In part our reservation vis-à-vis the explanation of path dependence as arising from the costs of making adjustments is due to the ad hoc character of the concept of switching costs. There is no general definition of what counts as adjustment or switching costs, and almost anything can be explained by invoking suitably defined switching costs. It is a basic insight of the philosophy of science that concepts that can explain everything do, in fact, explain nothing.

A different and, in our view, more important reason why we regard the explanation that path dependence may be due to the short-sightedness of evolution, as more interesting and more relevant in the case of corporate governance systems, is that it yields different and more interesting implications for the central issue of the convergence of national corporate governance systems. However, for the local hill argument to fully develop its heuristic potential, it needs to be enriched; the argument needs more structure and more substance to be meaningful. It is our proposition that the necessary

8There is one situation in which increasing outside pressure like a globalization shock leads to an observable result which appears indistinguishable from convergence. It is the case in which the outside pressure is so strong that all those firms which have attained a local optimum which is not at the same time a global one cannot survive, and in which there is only one global optimum. Then the survivors all look alike.
enrichment can be achieved by adding the concept of complementarity. We therefore now turn to presenting this concept.

III. Complementarity as an Explanation for Path Dependence

A. Why Complementarity is Important

If different corporate governance systems were equally good for the firms operating under them and for the respective countries, or if corporate governance systems were irrelevant for the success of firms and countries, there would be no reason to be surprised by the fact that national corporate governance systems differ as much as they do. However, both of these explanations for the persistence of evident differences are highly implausible. The fact that some countries like Germany and Japan hold on to strange and, as it seems to some observers, even inefficient systems suggests an explanation in terms of path dependence. According to the switching cost argument, one would argue like this: switching to a better system, i.e. one that relies mainly on capital market pressure like the Anglo-Saxon system, would cause costs which are too high in comparison to what could be gained by adopting that system; and in the past the pressure on Japan and Germany to improve their corporate governance systems was not yet strong enough. With globalization increasing the competitive pressure on all countries, one can expect that this situation comes to an end if – but only if – ‘inefficiency limits persistence’.

This view of path dependence limited by strong pressure and large differences of efficiency may be right, and it may also be the case that the German and Japanese systems are simply not good after all. Be that as it may; but as long as one is not more specific about what causes these countries’ corporate governance systems to be strongly path dependent, the simple statement that there is path dependence does not tell us enough. Moreover, this account depends on relying on one of the two alternative arguments why path dependence prevails and where it ends, and this is not the more attractive argument. In our view, the case for path dependence can be strengthened by invoking the concept of complementarity.

B. What is Complementarity?

Complementarity is an attribute of elements of a given system such as a corporate governance system, a financial system, the organizational or production system of a firm, or the system that constitutes the strategy of a firm. Elements of a given system are called complementary (to each other) if there
is the potential that they fit together well, i.e. take on values such that they mutually increase their benefit in terms of whatever the objective function or the standard for evaluating the system may be, and/or mutually reduce their disadvantages or costs. The twin concept to that of complementarity is consistency. Consistency is an attribute of the entire system which is composed of complementary elements. We call a system consistent if its elements do take on values which fit together and which, thereby, exploit the potential created by complementarity. By definition, not all systems with complementary elements are necessarily consistent.

Although the concepts of complementarity and consistency are quite intuitive, as they come close to what is implied when we talk informally about something being ‘really a system’, a very simple formal representation may be helpful for the ensuing discussion.9

Let a system consist of four elements $a$, $b$, $c$ and $d$. Each one of these elements can take on two values such as $a_1$ and $a_2$. Also assume that there is a measure that permits a pairwise ordering of systems as being ‘better’ or ‘not better’. Now let there be two systems, $S_1$ and $S_2$, with $S_1$ being composed of the choices $a_1$, $b_1$, $c_1$ and $d_1$, and $S_2$ of the choices $a_2$, $b_2$, $c_2$ and $d_2$, and two systems $S_1^*$ and $S_2^*$ (each with an asterisk to indicate their respective analogues) in which only the value taken on by one element, the element $a$, has been exchanged. We call the elements $a$, $b$, $c$, $d$ complementary to each other if the following relationships hold for the element $a$ and similarly for the elements $b$, $c$ and $d$:

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\begin{align*}
S_1(a_1, b_1, c_1, d_1) & \text{ is better than } S_1^*(a_2, b_1, c_1, d_1) \\
S_2(a_2, b_2, c_2, d_2) & \text{ is better than } S_2^*(a_1, b_2, c_2, d_2)
\end{align*}
\] (1) (2)

even though, according to widely held opinion,10 considered in isolation,

$a_2$ is regarded as being better than $a_1$ (and vice versa) (3)

and irrespective of whether

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S_1(a_1, b_1, c_1, d_1) \text{ is better than } S_2(a_2, b_2, c_2, d_2).
\] (4)

9More complex formalizations can be found in Milgrom and Roberts (1990, 1995a) and Hackethal and Schmidt (2000).

10The ranking of the choices for the elements considered in isolation does not make sense in a decision-theoretic framework as they need to be evaluated in the context of the system to which they belong. Therefore the statement about the ranking can only be a behavioural statement about how elements are generally, e.g. by the relevant group of practitioners, perceived or assessed.
Correspondingly, we call $S_1$ and $S_2$ consistent systems and $S_1^*$ and $S_2^*$ inconsistent systems. Intuitively speaking, in comparison to $S_1$ and $S_2$, the systems $S_1$ and $S_2$ are better because the values of the complementary elements have a better fit. In a situation like the one described by the four relationships, what matters more is the consistency of the systems, i.e. the differences in value between $S_1$ and $S_1^*$, and between $S_2$ and $S_2^*$, rather than the (perceived) ‘values’ of the individual elements of which they are composed. Complementarity as defined above is particularly important because the consistent configurations ($S_1$ and $S_2$) constitute local optima.

We provide a further illustration because it may make the relationship between complementarity and path dependence easier to understand. If the system under consideration is physical production with one output and two factors of production then, in the case of complementarity, the output surface looks different from that of the standard production-theoretic model. In the three-dimensional graphical representation of the standard model of production, output can be represented as a mountain levelling off at its sides whereas, in the case of complementarity, the output surface looks like a mountainous region with more than one hill and a valley between the mountains. Any substantial ‘improvement’ in output is tantamount to walking up the mountain slope on one side. A short-sighted hiker would strive for height by climbing up that side of the valley on which she happened to be or which appeared steeper to her. This would constitute myopic behaviour, which might lead her to a hill top which is not the highest peak in the entire area. Thus, striving for immediate gains in height is likely to make a hiker’s stroll a path dependent one: It matters where she started and where she reaches a (local) peak.11

C. Complementarity and Path Dependence

We claim, and by using the formalization from above wish to illustrate, that consistent systems change differently from entities which are not systems by our definition because, in real life, the change in a system is typically initiated by altering just one of several elements.

Assume for the moment that system $S_2$ is perceived by some observers to be better than system $S_1$ and that, possibly because of this, some external influence leads to the replacement of the seemingly ‘worse’ element $a_1$ by the ‘better’ element $a_2$ in what was initially the consistent system $S_1$. The resulting system is $S_1^*$ which is, by definition, inconsistent. As inconsistency means that the system $S_1^*$ is inferior in efficiency terms to the corresponding consistent system

11See also Milgrom and Roberts (1995b, pp. 238–41), a section entitled ‘hill climbing’.
there will be pressure for more efficiency gain and adjustment. One possible adjustment would consist in the modification of the other elements $b, c$ and $d$ such that the entire system $S_1$ is ultimately replaced by the presumed better system $S_2$. The other possible adjustment is one that reflected the attempt to increase efficiency immediately or myopically, and this can be achieved by simply restoring consistency. A fast efficiency-increasing move would consist in reversing the original move from $a_1$ to $a_2$ – and thus in a return from $S_1^*$ to $S_1$. In certain applications and, in particular, in a situation in which it would be important to quickly achieve some efficiency gain, the second form of adjustment seems more likely. This is why systems under strong pressure are likely to be trapped in a local optimum in the same way as the second explanation for path dependence discussed above suggests for the case of biological evolution.

We tend to believe that systems composed of complementary elements in which consistent configurations are also local optima and multiple equilibria exist, are more frequent in social life than is commonly assumed by economists and scholars from related disciplines. As we will argue in the next section, this could be the case for corporate governance systems: It might be economically more important that the elements of a given corporate governance system fit together well, than how ‘good’ the individual elements are perceived to be and even more than to which type of governance system a given national system belongs.

IV. Complementarity and Corporate Governance

A. Consistent Corporate Governance Systems

Corporate governance systems are composed of complementary elements in the sense just defined. A governance system can be described by listing its elements and indicating which values these elements take on:

- The distribution of ownership and residual decision rights (concentrated or dispersed)
- The distribution of ownership rights or residual claims and shareholdings (concentrated or dispersed)
- The board structure and the composition of the supervisory board (unitary or dual board system, with few or many board members representing outside shareholders as opposed to block holders and other stakeholders)
- The objective of the firm to which management is bound (shareholder value orientation alone or a more general stakeholder orientation)
• The general structure of corporate law (mandatory or enabling)
• The quality of accounting information for shareholders (transparent or opaque)
• The role and function of the stock market (among others, the existence or non-existence of an active market for corporate control)
• Access to capital markets (easy or difficult; general or restricted)
• The nature of stock market regulation (strict or not so strict) including insider trading regulation and the possibility of unfriendly takeovers (possible or impossible; easy or difficult)
• The dominant career paths in firms (mainly internal or more open to outsiders)
• The role of employees in corporate decision making (existing or not; mandatory or not).

Evidently, not all conceivable values for these individual elements would fit together and generate a workable corporate governance system. The distinction between the ‘outsider control system’ and the ‘insider control system’ introduced by Franks and Mayer (1994) reflects our notion of consistent corporate governance systems.

In the outsider control system, the capital market in its role as a market for corporate control is central, while internal control mechanisms are of only secondary importance. For such a system to function, all shareholders must be (almost) equally well informed; shareholding must be dispersed, and capital markets must be well developed; strict insider trading prohibitions and duties of loyalty must be in place and enforced so as to prevent the abuse of any informational advantage which might still exist; and managers must have the single duty of maximizing the value of the firm for its current shareholders. Further complementary elements include the absence of any form of codetermination, no governance role for banks and bank–borrower relationships at arm’s length and, finally, a unitary board that includes outside members representing the general shareholding public.

As its name suggests, an ‘insider control system’ relies not on markets but on internal mechanisms for monitoring the management. The most important internal mechanism is the supervisory board. Internal monitoring has the inevitable consequence that some people are better informed than others, and it requires that they have opportunities to benefit from their monitoring of management activity because, otherwise, they would hardly be

12The fear that she might be informationally disadvantaged can prevent a shareholder from accepting a seemingly attractive tender offer and thus undermine the functioning of the takeover mechanism.
prepared to invest the effort required to act as monitors of the management. On the other hand, the potentially well-informed monitors should not be in a position to abuse their informational advantages ‘excessively’. So, there must be mutual monitoring of the well-informed inside monitors, as can in principle be achieved if the supervisory boards of corporations are composed of people who represent different powerful groups of stakeholders. The supervisory board is as well the arena for co-operation with respect to the monitoring of management as that for conflict with respect to the specific interests of the different stakeholder groups. This fact makes it imperative that its functions be clearly separated from those of the management board. The insider control system cannot function without a *de jure* or *de facto* two-tier board.

Given the composition of the supervisory board and its role *vis-à-vis* the management, it is also evident that *exclusive* reliance on shareholder value cannot be the corporate objective and the yardstick for the performance of management (Schmidt and Spindler 1997). Banks are important in this system – as providers of long-term funding – and this explains why they will want to play an active role in corporate governance. With banks as active players, insider control systems tend to function better. The same holds in principle if there is a well-conceived system of employee representation. There is a certain coincidence of interests between banks as lenders and employees as well as managers. They all tend to benefit from a stable and safe development of the company in question, which is again consistent with a certain stakeholder orientation.

However, an insider control system with its characteristic orientation towards the interests of various stakeholder groups who play an active governance role, is not one whose functioning is assured easily. With a restricted role of the stock market and the welfare of different groups as an objective which is inherently fuzzy and not operational and therefore leaves much discretion for the management, the main problem of the insider system is that of finding a sound balance between co-operation and conflict among the different stakeholder groups so that their coalition can, and does, effectively monitor the management. Co-operation could be questioned if the stock market in its dual capacity as providing performance measures and as a market for corporate control played an important role, because strong pressure from the stock market would push management in a direction which differed from that desired by the active monitors.

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13In addition, there are also legal restrictions to the extent to which information obtained in the role of a supervisory board member can be used in other contexts. However, in practice, these limitations are not well defined. There can be no doubt that, in countries with inside control systems, private benefits are larger than in countries with outside control systems (Zingales and Dyck 2002).
As we have sketched them in the preceding paragraphs, both the outsider and the insider control systems are consistent configurations of the complementary elements that constitute corporate governance systems. There is no economic basis to judge *a priori* if a consensus-based and stakeholder-oriented insider system is better or worse than a capital market-based outsider control system. Our discussion of the prototypical outsider and insider control systems, which bear close resemblance to the British and US systems and the German and Japanese systems respectively, as they existed some years ago, demonstrates not only the meaning of the concepts of complementarity and consistency, but also their role in real systems.

**B. Normative Implications of Complementarity**

The normative implication of the preceding discussion is straightforward in principle, though not in practice. Given complementarity between the elements and the economic advantages of consistency, it would probably not make much sense to mix the outsider and insider control systems and to combine those elements that appear to be particularly valuable in each of the two types of systems so as to create the overall optimum. Using the formal representation introduced above, it would amount to making a change from the consistent systems $S_1$ and $S_2$ to some inconsistent systems like $S_1^*$ and $S_2^*$. A ‘middle of the road’ model of corporate governance is not likely to be viable and can, therefore, not be recommended from an economic perspective.

The context of European integration, which also addresses the harmonization of corporate governance systems, provides an example. It would not necessarily improve the British corporate governance system if important elements were introduced into it which observers, regulators or legislators find useful in the German system, and vice versa. It might only lead to an inconsistent and dysfunctional mixture (Berglöf 1997; Schmidt and Grohs 2000). In Britain, elements of an insider control system have been pushed in the 1990s, based on the findings of the Cadbury commission and on a general reappraisal of the role which institutional investors can – and, according to some observers, should – play in the governance of British companies. In Germany, there have been recent legislative efforts to foster the role of capital

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14See the description of different national corporate governance systems in Charkham (1994) and of the Japanese and German as they were a few years ago, in Hoshi (1998) and Schmidt (2001), respectively.

15See Charkham (1994). Charkham served as a member of the Cadbury Commission.
markets\textsuperscript{16} and strong public pronouncements to the effect that it is time to adopt a strict shareholder value orientation as the governing principle of publicly held large German corporations. Many of these measures entail the danger that the basis on which the British system used to rest, and that which used to underpin the German system, will no longer be solid in the future.\textsuperscript{17} To our knowledge, in both countries, the consistency of the respective system has never been addressed in the policy deliberations as an aspect which should be taken into account.

However, we should mention a risk inherent in overstating our case for consistency or systemic purity. To do so might serve to impede reforms that are useful even if they are not strictly compatible with the basic structure of the respective systems. We would not rule out the possibility that several of the newly introduced measures in the UK, where the role of outside directors has recently been strengthened, and the belated legal prohibition of insider trading in Germany constitute improvements in spite of their tendency to compromise the consistency of the outsider and insider systems, respectively. We admit in all frankness that we do not know how a balance between these two effects – reduction of systemic consistency versus general improvement irrespective of the system’s structure – should be struck.

C. Positive Implications of Complementarity: ‘Non-convergence’

What does complementarity imply for the possible convergence of real corporate governance systems? Conventional wisdom in the law and economics community would have it that a vaguely described process of competition among systems leads to the result that the best corporate governance system will be uniformly applied, in much the same way as competition in the market for steel will advance the best steel-making technology and ultimately lead to its universal adoption because some will adopt it and others who do not will be driven out of the market.\textsuperscript{18} At least as far as corporate governance systems are concerned, this analogy leaves too many questions unanswered: What is the best governance system? How could

\begin{itemize}
  \item The most visible example that come to our minds here are the changes that have been introduced recently by the ‘law for improving control and transparency in the economy’ and the ‘law to facilitate the raising of capital’. This legislation is inspired by a market-oriented philosophy, which is not consistent with the model of German corporate governance and, more generally, of the German financial and economic system.
  \item Hackethal et al. (2002) argue, however, that these and other recent developments in Germany are more compatible with the traditional German model than one might think.
  \item See Vanberg and Kerber (1994) for a discussion of the mechanisms of convergence.
\end{itemize}
a possible process of change occur? Who are the relevant actors in this process, and what drives their agendas? If we wish to answer these questions, we must look at the details of change processes.

There can be no doubt that there is, at present, a growing pressure on firms and nations to improve economic efficiency, among other things by introducing good corporate governance systems. However, it is difficult to imagine how this 'introduction' could be effected at all. Improvements are easier to introduce if this can be done step by step, or when the improvement is limited and well defined in terms of what it entails, or when there are examples of successful innovators, or when a strong case can be made for the change under consideration. None of these conditions is fulfilled in the case of a corporate governance system. Let us discuss these conditions one after the other.

1 Proceeding step by step is the same as changing a given system by altering one element at a time so as to arrive at the (presumed) better system. By definition, complementarity implies that partial changes with respect to individual elements do not result in an improvement if the starting situation is a local optimum. In practice, this could mean that a given new legal device or a non-standard corporate governance practice is not accepted by the relevant legal and business communities. The innovation might be discontinued or abolished again or simply fall into oblivion. Changes must therefore relate to at least a 'critical mass' of elements of a corporate governance system, and this is more difficult to implement.

2 The type of corporate governance that an individual corporation in a given country can use successfully strongly depends on the corporate governance system which prevails in that country, because lenders, clients, potential and current employees and others will prefer to deal with a corporation which does not differ in a fundamental way from others with which they are acquainted, and courts tend to apply the rules and interpretations to which they are accustomed. Frustrating the expectations of others would create important legal and commercial risks for an innovator in the field of corporate governance. In most of Europe, there is a second reason why it is, or at least was, almost impossible until a very recent ruling of the European Supreme Court for an individual corporation to opt for a different corporate governance system which might appear more attractive. In contrast to the US situation, European corporations cannot, or perhaps could not, choose the jurisdiction and, with it, elements of their corporate governance system by merely changing the location of incorporation. The applicable law is, by and large, the

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law of the place in which they do most of their business. Therefore, at least in Europe, the switching of jurisdictions by corporations is not a mechanism that could lead to convergence.

3 Even though corporate governance systems can easily be defined at the theoretical level, in practice, it is anything but clear where the limits of a corporate governance system must be drawn and which other elements of an economic and legal system would have to change together with the core elements of a corporate governance system if the goal were to make fundamental alterations to the existing governance system. There is complementarity between the different elements of an economic, social and legal system in which governance is embedded. Therefore, it is very difficult to imagine that a sweeping, overall replacement of one corporate governance system by another could happen in reality.20

4 Last, but not least, there is certainly not a general consensus as to what would be the best corporate governance system, let alone one which everybody would want to see adopted universally. The difficulty of determining the best corporate governance system is, again, due to the complementarity of the elements of any given corporate governance system as well as that between corporate governance and many of the elements of the more general economic and legal system in which a national corporate governance system is embedded. Evidently, these overall systems differ between countries.

These four arguments suggest a dilemma: It does not appear to be likely that individual innovators and national politicians could bring about a change of corporate governance systems which would ultimately lead to a convergence to the presumed best system. Any substantive change would have to be a very comprehensive one. Thus supranational ‘governments’ might have a role to play here. However, there is simply no supranational political authority or other entity which would have the knowledge and the power to impose, in several countries at the same time, what it might consider to be the universally best corporate governance system.21 This leads us to the negative result that a

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20In this context, it is important to understand how closely German corporate law, and thus also the legal basis of many elements of German corporate governance, is connected with tax law. The specifically German concept of groups of companies and the way they are treated by law (‘Konzernrecht’) are essentially an outgrowth of tax considerations. For a brief outline, see Spindler (1993, p. 7). At the same time, it is one of the foundations of the distribution of power between the two boards in German corporations. The ‘Konzernrecht’ gives so much power to the management that this requires a strong supervisory board as a counterweight.

21See Spindler (1998) on the role that major stock exchanges might play in this context in the future.
simplistic story of the competition and convergence of corporate governance systems cannot be valid.

D. A Different Scenario: Convergence Towards an Inefficient System

The arguments presented above are not meant to suggest that actions of individual innovators, national politicians and even supranational entities and the ‘interpenetration’ of different corporate governance systems have no effect on the corporate governance systems in the various countries. And even though there is probably neither a consensus nor incontrovertible evidence on what constitutes the best corporate governance system, not all conceivable systems are equally good, and almost everybody is at least to a certain extent interested in not having a corporate governance system for his firm or country, which is simply too bad. In fact, we believe that these very factors work together in what we consider to be an alternative scenario for the development of corporate governance systems – a scenario that can lead to ‘inefficient convergence’, and which might even be a realistic scenario for the development in the unifying Europe.

To present our alternative account, we need to recall the above presentation of the (Anglo-Saxon) system of outsider control and the (German and Japanese) system of insider control. Let us assume that these two are the only systems that countries could adopt. It is not obvious that one of them is superior in terms of its economic efficiency under normal and stable circumstances; and we certainly do not claim to know this either but, for the sake of making our point, let us assume that the insider control system is superior.

The two systems function according to different principles. More specifically, they make use of implicit contracts, mutually consistent expectations and trust to a different extent. The outsider control system is parsimonious in this respect. Its functioning hardly depends on agents anticipating correctly what other agents will do and what they will, in turn, expect other agents to do and to expect. The insider control system is fundamentally different. It requires much more in terms of mutually consistent expectations, and it relies more on trust. The proper functioning of this system involves a great number of people with different roles – managers, bankers, labour representatives and (other) board members – and different backgrounds. For the insider control system to function, the different parties need to learn what to expect from each other and to trust each other to a certain extent and to carefully balance cooperation and confrontation. This learning process requires time and stability.

Today, we are in an era of global competition and regulatory changes of all kinds and other corporate governance-related innovations coming from various sources. These developments are having destabilizing effects on both
systems. These effects are not equally important in both systems. The German insider control system is probably affected to a greater degree and, as a consequence, is also probably being destabilized to a greater extent.

Now assume that the process of destabilizing existing national corporate governance systems goes on for some time and even intensifies both in countries that use the insider control system and in countries that use the outsider control system. At some point, there might even be a general corporate governance ‘crisis’. By the term crisis, we mean a situation in which most governance mechanisms fail to function. For example, attempts to introduce hostile takeovers into an insider control system could lead to so much controversy within supervisory boards that they cease to monitor the management.\(^22\) In the outsider control system, shareholder activism following the German model could create widespread suspicion that there are strong informational asymmetries, which would reduce the liquidity and the informational efficiency of the stock market and undermine its functioning as a market for corporate control.

Such a crisis would reduce overall economic efficiency and could create strong pressure from many sides to restore some kind of order immediately and at least on a national level. In such a case, firms and national authorities in all affected countries would have to settle for some ‘workable’ national corporate governance system, necessarily a consistent system as any consistent system is better than an inconsistent system. Assume that the changes that have been brought into the systems have gone so far that the ‘natural’ tendency to go back to the former system is not strong any more. Thus despite the crisis, and even more so in the case of a crisis, the fundamental choices continue to be the outsider and the insider control systems.

It is impossible to make precise statements about what the process that would eventually lead to a consistent system could look like. However, under the circumstances we assume here, the idea of a deliberate process of making a well-informed choice of the most efficient corporate governance system does not appear appropriate. Instead, this process is likely to be a rather chaotic one, and it would in all likelihood be myopic. That is, it would probably rather have the attributes of the processes assumed in evolutionary biology than those in standard economic theory.

However, what is even more important is this: in a situation in which there are strong reasons and acute public pressure to do ‘something’, and to do it fast, the criteria for determining the ‘winner’ in the ensuing competition between corporate governance systems will be different from those which,

\(^{22}\)For instance, the attempt by Krupp to stage a hostile take-over of Thyssen in 1997 has made it seem possible that Anglo-Saxon-style hostile take-overs might upset all those implicit contracts which have in the past helped to define the role of representatives of large banks on the supervisory boards of German corporations.
hoping, apply under normal circumstances. The system for which firms and authorities in their respective roles would probably settle in all countries would most likely not be the one with the most desirable economic consequences under normal and stable conditions – as such conditions do not obtain any more – but rather the one with the most attractive features in the crisis. In such a situation, stable expectations are no longer justified, trust does not seem appropriate any more, and implicit contracts cannot be expected to be honoured. Therefore, the best system would be one that relies least on these elements.

Between the two prototypes of corporate governance systems, some variant of the outsider system would be the best choice in this situation. In particular, it would be very difficult even to imagine a return to the old German system, or a functioning insider control system in general, after expectations have been frustrated at a large scale, trust has been undermined and implicit contracts have been broken in the course of the crisis.

We thus come to the conclusion that, in what would amount to a competition under crisis conditions between the two systems, which would have both been shaken up and destabilized by external factors, the winner would probably be the Anglo-Saxon system – not because it is better under normal and stable conditions, but because it is simpler to achieve and to maintain: the more widespread the crisis is, the more likely a convergence to the more ‘crisis-resistant’ consistent system would be. As our assumption of the superiority of the German–Japanese system can indeed be true, there is the possibility of a convergence to an inefficient equilibrium.

Note that we do not want to make any claim that some variant of the German–Japanese system is indeed the better system. The present economic situation in Germany and the prolonged economic crisis in Japan would cast some serious doubts on the actual truth of any such claim. Given the importance of corporate governance and of the possible convergence, though, we feel that the issues raised in the preceding discussion and, in particular, the question of which system would emerge as the ‘winner’ in a crisis, is more than an intellectual exercise.

V. A Brief Concluding Remark

The first version of this paper was written in 1998. At that time, we ended it by saying that we did not want to predict a corporate governance crisis,
especially not a universal one, but that we merely wanted to point out this possibility and its implications. Today, we think that we might already be in the situation that we defined as a crisis above. In Germany, the traditional distribution of governance roles is questioned by the formerly powerful big banks pulling out of their traditional governance role and leaving behind them what appears to be a control vacuum. German top managers seem to be less under control now than they used to be in the old times of the non-transparent ‘Germany Inc’. In the USA, the market for corporate control has been crippled in the course of the 1990s, and a series of recent scandals has profoundly shattered public confidence in the US corporate governance system. The ‘battle of the systems’ (Walter 1993) seems to be an open race again. Our paper argues that, under the prevailing circumstances, this battle might be fought according to different rules than those of the past. Not economic efficiency, but the ability to cope with a crisis might be the factor that determines the winner. Our paper contains a prediction on how this contest will end.

Reinhard H. Schmidt
Wilhelm Merton Chair for International Banking & Finance
Johann Wolfgang Goethe-University of Frankfurt
Mertonstrasse 17
D-60325 Frankfurt/M.
Germany
rschmidt@wiwi.uni-frankfurt.de

Gerald Spindler
Lehrstuhl für Bürgerliches Recht, Handels- und Wirtschaftsrecht,
Multimedia- und Telekommunikationsrecht, Rechtsvergleichung
Platz der Göttinger Sieben 6
D-37073 Göttingen
Germany
lehrstuhl.spindler@jura.uni-goettingen.de

References


