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Governance, Economic Restructuring, and International Competitiveness

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The (de-)regulation debate of the 1980s only marginally touched upon two central theoretical, as well as practical, aspects of the problem: the *functions* and the *institutions* of regulation. As a rule, economists consider that there is a *function* for regulation only in the case of market failure, since their ideal is the perfectly competitive market. One can distinguish three types of market failure. In *substantial* terms, market failure arises when the market process does not lead to an efficient allocation. Second, there can be market failure in *social* terms, when efficient allocation implies an unacceptably unjust income distribution. This social aspect is devoted distinctly less space in the regulation debate. Third, there can be market failure in *temporal* terms. Solutions that are efficient in the short run may be suboptimal in the long run due to shortsighted planning horizons. Regulation could provide the necessary preconditions for long-term planning and efficiency. Up to now, this function of regulation has been

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poorly elucidated in theoretical as well as economic policy discussions.

Besides neglecting the temporal level of market failure, the neoclassical regulation debate has been restricted to the institutions of market and state. Regulation is always state regulation. It is overlooked that there are other institutions, such as associations or firms, that also participate in the coordination or governance of economic activities. In this paper, we will describe and evaluate the performance of various governance institutions. The traditional economic view holds that regulation rigidifies. Adaptation and change of economic structures, as necessitated by increased international competition, require a reduction of state regulation. Against this position, we will argue that some regulatory institutions enhance, rather than decrease, the adaptive capacity of economies. In evaluating governance institutions, we will omit social criteria and restrict ourselves to the dominant criterion in the neoclassical approach: allocative efficiency under conditions of intensified international competition. Our question is, what meaning do various governance institutions have for structural economic change? Can they also facilitate structural change and increase international competitiveness?

In this article, we summarize economic theories of regulation and argue that these do not adequately consider the temporal aspect of market failure. We develop a typology of economically relevant governance institutions in addition to the dichotomy of market and state. Other institutions considered are the firm, the network, and corporatism. We present the results of an international comparison that illustrates the variety of governance arrangements, and we indicate which institutions are most efficient in mastering which (sector-specific) governance problems. Efficiency will be narrowly defined in comparative-static terms: the performance–measured by foreign trade as the indicator of international competitiveness–of one governance institution in comparison to another. Needless to say, foreign trade performance depends on a number of variables such as trade barriers, factor prices, and industrial subsidies. However, our argument is that these variables, too, are decisively determined by governance as conceptualized in this paper. Hence, the impact of governance on economic performance deserves special attention.

The Time Dimension of Market Failure

Normative theories in support of regulation take as their reference point the perfectly competitive market. Only when the market fails to provide an optimal allocation is regulation justified. Such market failures could result from natural monopoly, ruinous competition, externalities, and information asymmetries.

All normative approaches to regulation are static. Time is given no systematic consideration. Neoclassical approaches treat the future as any other commodity that can be exchanged at markets. In futures markets, individuals can trade present consumption for future consumption at an intertemporal discount rate. But exchange implicitly assumes the commodity-character of the exchangeable and hence in principle reversibility of the transaction.[1] Thus, the futures market approach implies the exchangeability of today and tomorrow and therefore cannot deal with time as an irreversible, historical path. However, a decision made today may produce irreversible outcomes tomorrow. We can exchange steel today against steel tomorrow (plus interest rate for postponed use). But how can we deal with the fact that no training today means no skills tomorrow?

Williamson [1975], who points to the function of regulation in reducing transaction costs, does consider the problem of irreversibility of decisions when he stresses the existence of sunk costs. He argues that both parties to an agreement are committed to specific and nonsalvageable costs [see Hodgson 1988, 155ff]. But since he allows for the possibility of rational calculation and minimization of transaction costs, he neglects the uncertainty (as opposed to risk) that is also inherent in any time-consuming path.

Positive theories of regulation describe and explain (but do not normatively justify) regulation as a consequence of the self-interest of the regulatory authority and related actors. Public choice theorists, for example, see regulation as an instrument for redistribution between different groups. But neither deal with the time dimension.

The contract-theoretical approach sees regulation as justified by the public interest. In this view, a regulatory authority acts in the public interest if the policy pursued corresponds to a long-term contract that a coalition of consumers would also conclude with producers, but where such a private contract would be inferior to public regulation. Such a contract includes the long-term provision of goods and is in the interest of both contract parties. It

ensures a stable supply for consumers and stable sales for producers. The approach explicitly incorporates the long-term problem of economic decisions and of allocation of goods over time. But it still remains an open question regarding under which conditions it is better to use contract-theory-based regulation than market allocation.

Thus, it can be concluded that neoclassical and alternative approaches neglect one specific type of market failure: the long-term irrationality of short-term rational decisions by market participants. Regulation can prevent misallocation over time.

Regulation and the Time Dimension– A Keynesian Approach[2]

Time as a historic path in an uncertain world is a key theme of the Austrian School of Economics. Hayek [1941] stressed the role of time in increasing the likelihood of erroneous investment decisions, of lack of coordination of decisions, and of cumulative investment errors. However, he considered prices capable of coordinating intertemporal decisions. Regulation would only disturb this process. A fall in interest rates would indicate an increased willingness to forgo present for future consumption and therefore create incentives for engaging in production processes of a greater degree of roundaboutness [see Garrison and Kirzner 1987]. It was exactly by criticizing implicit assumptions of both the neoclassical and the Austrian School concerning the price mechanism that Keynes [1936] came to the opposite conclusion, namely that institutions outside the market were needed for intertemporal coordination.

Keynes showed that decisions that are rational in the short run may lead to irrational outcomes in the long run because these decisions are guided by wrong criteria: prices (long-term interest rates), which are dependent on short-term calculations. Keynes did not deny the signal function of prices that Hayek stressed so much, but he claimed that the signal was wrong. Neoclassical theory and the Austrian School implicitly assume that short-term decisions are based on short-term criteria and long-term decisions on long-term criteria. Keynes showed that long-term decisions are based on wrong, namely short-term, criteria. Private investors make their investments in real capital, dependent on their expected return and on the long-term rate of interest.[3] The *expected* returns

of an investment over its entire lifetime are, as a rule, stable.[4] They are formed on the convention that the present is a good guide for the future and the behavior of the majority a good indicator for one's own behavior [Keynes 1936,152]. Problems result from the financing of investments through the stock market (or other financial markets), where the price of long-term assets is determined. Speculators are active on this market, and their rationality is one of short-term calculation. Expectations for the near future determine the price of long-term assets. Successful speculation requires correct estimations of the expectations of others and not of the actual value of assets, and it requires action in anticipation, rather than in conformity, with the majority.

Because private investments depend on the stock market or on other financial markets for their financing, and because investors have the choice to invest in financial or in real capital, entrepreneurs are forced to act as speculators when making investment decisions. Entrepreneurs must orient themselves to short-term changes in securities prices, making it difficult to plan for the long-term. The signal of the interest rate is systematically wrong for intertemporal allocation. The waves of optimism and pessimism triggered by it–a self-reinforcing crisis process–are the core of Keynesian theory. Keynes viewed the stock market as a destabilizing institution because it generates systematically false decision-making criteria: expectations about the expectations of others, rather than genuine expectations about investment projects and firms. He wanted to decouple investment from speculation. Hence, he called for the creation of institutions that generate socially justified expectations, i.e., long-term decision-making criteria for the formulation of long-term expectations.

Structural Change as a Temporal Dilemma of Rationality

With structural uncertainty[5] about the future development of demand, the danger exists that investments, which only yield returns in the long run, will not be made in a market economy. The danger is all the more present the greater the uncertainty about future sales prospects and the higher the sunk costs of a long-term investment project.

The situation can be represented as a prisoner's dilemma: while long-term investments are required to maintain long-term international competitiveness, firms will not make such invest-

ments because it will reduce their short-term profits. The logic is similar to that in the problem mentioned by Keynes: long-term investment planning is guided by short-term competitive positions on markets. Firms have to take account of what their competitors do in the present and short run. By following short-term strategies, nevertheless, a historical, irreversible path is initiated that may lead to long-term deficiencies.

There are two ways to solve this problem. First, firms could cooperate with their competitors and provide a stable market environment that allows for long-term investment planning. Pooling resources into a common knowledge stock, for example, could solve research and development deficiencies (see Binmore [1992] for a comprehensive overview). Such a cooperation pattern could be called a network. However, spontaneous cooperation will be difficult to realize in the case of structural uncertainty regarding future market developments. Game theory only applies to parametric uncertainty. In the case of structural uncertainty, a reiteration of the game becomes difficult because the pay-off matrix changes erratically.[6] Furthermore, when the sunk costs to be incurred are very high, the incentive to deviate from the cooperation is great. Structural uncertainty and high sunk costs make the appearance of a prisoner's dilemma situation very likely. And the longer the time period in question, the quicker the reaction of markets to increased internationalization; the greater the fluctuations on financial markets, due to increased financial capital mobility, the more likely is the appearance of structural uncertainty.

In such a situation, regulation by an external authority becomes a sensible instrument to secure a long-term orientation of business decisions, which is important for structural change and international competitiveness. Examples of regulatory measures that create an adequate climate for long-term planning and investment are the provision of political stability, the reduction of strike incidence through the stimulation of negotiations and a fair income distribution between labor and capital, the prevention of cumulative effects of bankruptcies, and the provision of public goods that the market cannot supply in sufficient amounts.

A typical area in which a prisoner's dilemma regarding long-term investments appears is research and development. High sunk costs and high uncertainty about the success of the research make short-term projects more attractive. But in the long run, this can

lead to loss of international competitiveness. The provision of a research infrastructure or the assumption of research costs by the state are such public goods,[7] which the market could not provide autonomously in sufficiently high quantity. Another area where the market has difficulty in providing sufficient goods is that of vocational training. It does not pay for firms to invest in the training of their workers when they can be bought away by competitors. However, the long-term outcome of such short-term decisions is an insufficient supply of skilled labor.

However, the positive function of regulation–stabilization of expectations and facilitation of long-term investments–may be offset by regulatory failures. By this we mean that regulation could create structural rigidities and inefficiencies: oversized research and development units, an improperly trained work force, and incentives to firms to take on too little risk. One must be aware of a *trade-off* between *reduction of uncertainty* and *safeguarding of flexibility*. While regulation is more suitable to the reduction of uncertainty than the market, the latter is better fit to safeguard flexibility. In order to secure successful structural adaptation to changing competitive conditions, it is necessary to strike a balance between the requirements of flexibility and stability for long-term orientation. Therefore, it is an empirical question whether the benefits of uncertainty-reducing regulation outweigh its costs.

A Typology of Economic Governance Institutions

Neoclassical regulation theory considers only the alternatives of market and state [e.g., Joskow and Noll 1981]. Regulation, understood as dirigistic state intervention, and deregulation, understood as the restoration of market forces, are the alternative political-economic orders. Exceptions can only be found outside mainstream economics. Real institutionalists like John R. Commons define institutions as collective action in control of individual action and consider a variety of types: customs, the family, the corporation, the trade union, the state, and the market [see Neale 1987,1178f].[8]

All of these institutions are incentive systems. They set the conditions of success for the realization of economic actors' goals and thus govern their activities. Certain actions become more probable than others. Therefore, they have also been called economic governance institutions. Markets are also incentive sys-

tems that regulate behavior. Hence deregulation does not actually mean the breakdown of rule systems, but only the replacement of one (the state) for another (the market).

Three basic types of incentives can be distinguished: *power*, (material) *rewards*, and *normative recognition* [Etzioni 1968]. The neoclassical focus on governance by market or state includes only the first two types of incentives. However, normative orientations also regulate economic activities, as the discussion on firm or organizational culture in the newer management literature testifies [e.g., Ouchi and Wilkins 1985; Smircich 1983].

In reality, relations between economic actors are not governed by a *single* type of incentive, but by the interaction of power, rewards, values, and norms. Hence, governance institutions must be distinguished empirically with regard to their mix of incentives. This makes classification of governance institutions more difficult. Several classifications have been made in the literature, which go beyond the dichotomy of market and state [e.g., Hague and Clignet 1982; Ouchi 1980; Schmitter and Streeck 1985]. For our purpose, the following governance institutions have been distinguished:

The market. Allocative principles are exchange and price. The latter is determined by supply and demand of a large number of anonymous market participants. The basic framework for exchange is the fixation of property rights. Other characteristics are voluntary participation (contract autonomy) and objectification of economic relations ("only respect for the thing, no respect for the person," as expressed by Weber [1922] and by Marx [1890]). Of the three incentive types considered, material rewards are dominant.

The firm or organization. Transactions can take place not only via the market, but also within organizations. The reasons for such internalization of transactions are controversial. They are attributed either to power [e.g., Marglin 1974] or to efficiency [Williamson 1975]. Allocative and incentive principles of the organization are power, hierarchic authority, and material rewards. All internally produced services are valued by an authority rather than by exchange processes. The material incentives, provided by those in power, rely for their effect on utilitarian calculations of the other actors in the firm.

The state. Allocative principles here are also power, authority, and material rewards. What distinguishes it, however, from the firm and the market is, first, that its primary governance function lies in the provision of *collective* rather than private goods, because

private provision of such collective goods runs into considerable collective action problems [Olson 1965]. Second, the state is also dependent on normative incentives. Its authority needs legitimation.

Corporatism. Allocation and regulation occur here through private associations, either autonomously or in cooperation with state agencies [Lehmbruch and Schmitter 1982; Schmitter and Lehmbruch 1979]. As with the state, the primary goal is the provision of collective goods. The incentive set is a mixture of power, material rewards, and normative appeals. Stability of associational allocation requires a certain congruence between the interests of the association and those of its members. There are many collective action problems that produce a deficit of incentives. In the absence of state support for the associations involved, they have to rely heavily on normative incentives.

Networks. Finally, there is a type of governance institution that has been identified by various names: clan [Ouchi 1980], (informal) network [Lindberg et al. 1988; Powell 1990], or obligational/relational contracting [Dore 1983; Williamson 1985]. They all refer to relationships of intensive and long-term cooperation between firms, which are neither anonymous market relations nor formalized hierarchic relations. Business partners are enduringly dependent upon each other, e.g., because of high asset specificity. The latter makes the termination of the relation costly. Relations require trust, and mutual obligations are hence often less detailedly formalized than in market contracts. The most important incentive is hence normative: trust, either on the basis of shared norms and values or on mutual dependence and shared interests. The basic function is the exchange or pooling of resources such as know-how, information, sources of credit, research and development, the distribution of market shares, and price-regulation. Networks may take various forms: supplier-customer contracts, regular but informal conversations between management, interlocking directorates, or joint ventures.

In so far as networks organize the *exchange* of resources, they differ from market relationships in that there is less contract autonomy and a less objectified exchange relationship. If networks refer to the *pooling* of resources, they differ from firms in that pooling occurs through *inter-*, rather than *intra*-organizational coordination. The participating actors preserve their autonomy.

Governance Institutions and International Competitiveness

To empirically analyze the impact of governance institutions on international competitiveness, we employ a combined cross-national and cross-sectoral comparison. First, it will be investigated how variations in national mixes of governance institutions *within* three specific sectors are related to different capacities for structural adaptation. Imports as a percentage of exports by sector, an indicator much used in debates on international competitiveness, will be used as the measure of successful restructuring. Comparative studies were available for the steel, machine tool, and automobile industries. The countries selected for comparison in these studies are among the most important manufacturers in these sectors. In a second step, governance arrangements *between* sectors will be compared. This broader comparison improves our understanding of the efficiency of governance institutions. In a cross-national comparison within sectors, the evaluation of the efficiency of governance institutions may remain limited to sector-specific structural problems. There may be no one best way of governance if sector-specific problems require distinct institutional approaches. Hence, only cross-sectoral comparisons may permit more general conclusions concerning the influence of governance institutions on economic restructuring.

Cross-National Sectoral Comparisons

Cross-national comparison of the steel industry in the United States and Japan reveals starkly contrasting development. Since 1945, U.S. steelmakers have experienced a continuous decline. As they lost their technologically dominant position to Japan, the foreign trade position deteriorated. While the United States became a net importer from the late 1950s onward, Japan very early took the role of an export champion in external trade with steel (see Table 1).

The most important governance problem in this sector comes from the combination of high capital requirements with rather volatile sales markets. This makes investment open to greater risk of overcapacity than in many other sectors. At first glance, Japanese companies seem to perform better because they take more risks to invest in modern equipment than their U.S. competitors. But on closer examination, national governance arrange-

Table 1. Foreign Trade Performance of the U.S. and Japanese Steel Industries

Five-year averages	U.S. Imports in % of Exports	Japanese Imports in % of Exports	U.S. Exports in % of World Exports	Japanese Exports in % of World Exports
1950-54	-	-	15.8	5.4
1954-59	-	-	11.5	4.7
1960-64	166.4	5.0	8.3	14.9
1965-69	471.9	1.4	5.5	25.7
1970-74	346.1	0.6	5.7	33.1
1975-79	623.3	1.3	2.6	34.4
1980-84	858.9	8.0	1.9	27.7
1985-89	1124.5	18.6	1.4	21.3

Source: Statistics of World Trade in Steel 1913-1959, United Nations, Geneva 1961; World Steel Trade Developments 1960-1983, OECD Paris 1985; The Steel Market in 1985 and the Outlook for 1986, OECD Paris 1986; The Steel Market in 1987 and the Outlook for 1988, OECD Paris 1988; The Steel Market in 1989 and the Outlook for 1990, OECD Paris 1990 and the authors' own calculations.

ments in Japan, unlike those of the United States, systematically stimulate long-term modernization. Japanese arrangements enable firms to partly externalize investment risks, whereas U.S. firms have largely to internalize them [O'Brien 1994].

The Japanese have formed a network between MITI (the Ministry of International Trade and Industry) and the sector's large firms, which govern investment decisions. The participants agree to allocate new capacity rights to firms according to the following criteria: the firms' past market share, the efficiency of existing capacity, and expected future demand [O'Brien 1994]. Originally, this system was established and authoritatively governed by MITI. Later, capacity expansion became coordinated autonomously between firms, with a largely hortative role for MITI. This system reduces uncertainties about possible future overcapacity through allocation of capacity quotas. At the same time, it makes this allocation to firms contingent upon their ability to achieve productivity gains. Thus, it consistently encourages firms to adopt a long-term strategy of investing in the latest technology. In the absence of a comparable system, U.S. firms have to face far more market instabilities. Hence, their main objective is to maximize short-term profits and to minimize losses due to the business cycle. Technological modernization becomes of secondary importance.

For a long time, the worldwide supply of machine tools was dominated by German and U.S. producers, who pioneered technological development in this sector. However, in the early 1980s, their competitive edge was challenged by fundamental changes in their markets. Competition from producers in Japan and the newly industrializing countries increased. Furthermore, demand shifted from rigid forms of mechanical automation to flexible machine tools numerically controlled by computers. While German firms have managed to consolidate their position in the world market after initial difficulties, U.S. companies largely failed to adjust themselves to the new situation, as expressed in the dramatic deterioration of the United States' sectoral foreign trade since the late 1970s (Table 2).

This difference in adaptability seems related to a difference in governance arrangements, which nevertheless are designed to cope

Table 2. Foreign Trade Performance of the U.S. and West German Machine Tool Industries

	Imports in % of Exports		
Country	1977	1980	1983
West Germany	19.1	29.6	25.4
United States	76.4	130.6	142.1

Source: United Nations, International Trade Statistics Yearbooks, SITC 736.

with the same problem [Herrigel 1994]: the high sensitivity of demand for machine tools to the business cycle. The U.S. industry has responded to this problem with a strategy of *risk minimization*. This was done through vertical integration and the creation of large firms, in combination with specialization and standardization within these large firms. By contrast, German firms are embedded in a system of network-like and corporatist governance. There is interfirm cooperation in noncompetitive areas (including know-how transfer and product development), cooperation between firms and universities in precompetitive research and development, and cooperation among firms, unions, and business associations in vocational training. One could typify the German approach of coping with sectoral demand cyclicity as *risk distribution*, as important operations are partly externalized by firms to other agents.

For reasons analogous to the steel industry, risk externalizing proved superior to risk internalizing in mastering the machine tool industry's adjustment problems in the early 1980s. Backed by external services, German firms could more easily adopt long-term innovative strategies, while U.S. firms were reluctant to risk investing in promising new technologies, since they had to bear all the costs themselves.

The focus in the study on the automobile industry was on the adjustments the industry was confronted with in the 1970s: the oil crisis of 1973-74, which brought a decline and greater volatility in demand and a shift to more fuel-efficient cars; and increasing competition from Japanese manufacturers for their American and European counterparts. Producers could respond to these challenges in two ways. First, through Taylorist rationalization measures, they could try to defend their share in mass markets against the Japanese. Second, they could try to escape the fierce competition in mass markets by concentrating on upgrade or higher quality market segments.

The firms' choice between these product policies was decisively influenced by the framework of industrial relations [Streeck 1986; Streeck and Hoff 1983]. In most countries, industrial relations arrangements allowed firms to adopt an *external* strategy of manpower adjustment, that is, (selective) dismissals and recruitment. This was the more obvious choice, as external manpower adjustment was customarily coupled with rules imposing *internal* rigidities such as job control. Prominent exceptions were Sweden and Germany. In these countries, external adjustment options were largely inaccessible because of the elaborate employment protection. Hence firms, in cooperation with unions and works councils, had to resort to internal manpower adjustments. They improved their adaptability through an investment in manpower skills and more flexible work schedules and individual task assignments.

Product and manpower policies are linked. Internal manpower adjustment favors upgrading policies. It provides firms with competitive advantages exactly in those dimensions important in higher market segments: the ability to customize goods and to meet high quality standards. Conversely, external manpower adjustment favors product policies concentrating on mass markets. It facilitates Taylorist rationalization and adjustment of employment to market fluctuations. In terms of performance, internal

manpower adjustment and product upgrading was more risky in the short run but more successful in the long run (Table 3). External manpower adjustment allowed for faster responses to changing market conditions. Ultimately, however, internal adjustment strategies proved superior, since they opened more stable and profitable markets.

Table 3. Foreign Trade Performance of the Most Important Automobile Producing Countries

	Imports in % of Exports		
	1975	1977	1982
United States	261.0	302.1	678.8
Japan	5.9	3.6	1.9
West Germany	39.0	35.3	21.3
France	31.0	38.0	79.6
Italy	59.0	72.4	249.9
Sweden	92.4	105.7	50.5
United Kingdom	104.7	171.3	300.8

Source: International Trade Statistics Yearbooks, United Nations; Statistics of Foreign Trade Series B, OECD, Paris 1975. Due to changes in the classification scheme, this time series is not strictly comparable. 1975: SITC 732.1, 1977,1982: SITC 781.

A Cross-Sectoral Synthesis

The cross-sectoral comparison indicates that there is no one best way of institutional governance. The most successful institutional arrangements in each of the sectors in Table 4 differed with respect to participating actors and to the nature of their relations. Evidently the diversity of structural problems requires customized governance solutions. Nevertheless, on the whole, corporatist and network-like institutions seem to be most efficient in terms of facilitating structural change.

The advantage of these institutions is that they favor long-term orientations in policy calculations. In all three sectors considered, background conditions are created such that short-term adjustments, which are suboptimal for long-term structural change, become less worthwhile and hence less probable.

The *market* has an opposite effect. It favors the short-term adjustments required for direct survival under fierce competition. A small firm is incapable of setting priorities in the time dimension.

Table 4. Governing Structural Change in Comparison: Institutional Solutions with Comparative Advantages

Sector	Country	Governance Problem	Concrete Problem Solution	Comparatively Superior Governance Institution
Automobile industry	FRG, F, GB, I, S, USA	Product policy	Productivity alliance between capital and labor (FRG, S)	Corporatism
Steel industry	JP, USA	Investment policy	Productivity alliance between producers and government (JP)	Network
Machine Tool industry	FRG, USA	Research and development	Symbiotic risk distribution through cooperation between producers, associations and public agencies (FRG)	Corporatism and network

It has to conform to the dynamics of the market–including its temporal priorities. By contrast, large firms may be able to pursue long-term goals by internalizing exchange processes. However, they run the (opposite) risk of forfeiting flexibility. They acquire one important precondition for successful structural change by jeopardizing another. State regulation has similar disadvantages. It may be able to set effective incentives for long-term orientation; however, this too engenders frequently efficiency-limiting rigidities, as emphasized by the advocates of deregulation.

Corporatism and networks are better than the market, the firm, or the state because they are able to optimize the conflicting requirements of flexibility and long-term orientation. This is because they combine the incentives of power, material rewards, and normative recognition in a more complex manner than the other governance institutions. They incorporate private expected gains in that they are built on exchange relations, but without organizing them according to the strict rule of market competition. Likewise, these institutions are based to a large extent on the use

of power but without this occuring through the creation of rigid hierarchies, as may happen in the case of the state and firm. In comparison, the market, state, and firm are more *specialized* in their incentive systems and thereby restrict actors to a *narrower* spectrum of promising alternative actions (e.g., short-term maximization goals in the case of the market). It is exactly in phases of fundamental economic change that the disadvantages of such a relatively high degree of specialization of governance institutions might outweigh the advantages, for as a general principle, the institutional expansion of manoeuvering room through network-like and corporatist arrangements enhances the temporal autonomy *and* flexibility of actors and thus increases their adjustment capacity.

The generalizability of these findings regarding the relation between governance and institutional change remains questionable, especially since the efficiency of governance arrangements seems to depend on the nature of sectoral problems. All three sectors studied have something in common: a strong exposure to world competition. And one could expect that the degree of foreign trade interdependence influences the governance effects generated by corporatism and networks. Less exposure to international competition could entail less efficiency. Studies on Austria's printing industry [Traxler 1989] and on the German, British, and Austrian dairy industry [Traxler and Unger 1994] show that corporatism in these comparatively protected sectors serves not so much to increase long-term efficiency, but to externalize costs and to expropriate special rents. In sectors exposed to global competition, such is less easily done. Therefore, the positive relation between corporatist and network governance and economic competitiveness is limited to exposed sectors.

The results of the sectoral studies considered here can be generalized to the entire exposed segment of the economy because it has certain problems in common that have to be resolved in order to compete successfully with the low-cost, mass-produced goods of the newly industrializing countries [e.g., Piore and Sabel 1984; Sabel 1982]. These problems include: a growing need for highly qualified workers, an intensification of research and development, an increase in capital intensity of production, an improvement of quality standards, and more and more customized demand. As described above, in the course of such adjustment processes, long-term orientation *and* flexibility are demanded of the economic ac-

tors. Because the optimization of these conflicting demands is easier in the context of corporatist and network-like cooperative relations, a key role in structural change falls upon these governance institutions.

The significance of such cooperative relations for economic success is hardly a novelty. Many comparative studies have shown that countries which could rely on corporatist-based economic policies were significantly more successful in the 1960s and 1970s than others in optimizing macroeconomic goals such as economic growth, price stability, and employment [e.g., Schmidt 1986; Cameron 1984; Schmitter 1981]. Under conditions of Keynesian demand regulation and dominance of standardized mass production, concertation between state, unions, and business associations on incomes policy was a strategic form of economic governance. Meanwhile, the discreditment of Keynesian macrosteering and changing competitive conditions on world markets require new forms of corporatist governance. As the sectoral studies presented here show, the need for restructuring of economic sectors calls for new forms of supply-oriented corporatist concertation to replace demand regulation. Furthermore, the changed political-economic conditions have revalued networks, relative to corporatist arrangements, as they seem better suited to micro-level governance.

On the whole, there seems to be a continued need for governance institutions beyond the market, state, and firm, even if their concrete forms and functions change over time. Their significance is even likely to increase in the future. The reason is the secular trend of more functional differentiation and specialization in modern societies. This implies that societal subsystems (e.g., economy, education, science, and politics) become ever more idiosyncratic in their functioning principles, such as goal-setting, criteria of success, or language. This produces more and more problems of communication and coordination between subsystems [Offe 1987; Schimank and Glagow 1984]. Such problems require institutional bridges between the different subsystems [Traxler 1986a]. Corporatist and network-like arrangements are well suited to this intermediary function because they create frameworks for cooperative relations between actors from different subsystems, whose concertation is important for dealing with the problem at hand.

If one comprehends networks and corporatism in this sense as intermediaries, then it will be clear that they cannot replace the classic governance institutions–market, state, and firm–but only complement them. Their presence may not be a sufficient condition for realizing comparative advantages in structural economic change; however, it is a necessary condition.

Notes

1. Reversibility in this sense does not mean that decisions once made can be reversed, but rather that today's goods can be exchanged for tomorrow's goods. The decision to produce an apple today is irreversible, since this very apple will decay tomorrow. But today's fresh apple can be exchanged against tomorrow's newly produced fresh apple at the moment of the decision making.
2. For a comprehensive description, see Unger [1981].
3. More precisely stated, on the marginal efficiency of capital, that discount rate that equalizes the discounted expected returns of an investment to its supply price.
4. For simplicity of the argument, we refer here to Leijonhufvud's [1968] reductionist interpretation of Keynes. An institutionalist's or Post Keynesian's view would suggest that even real investment is uncertain. Then the problem would not only be that prices can be false, but that we simply cannot know whether they are true or false. However, when one adopts this latter interpretation, fluctuations and speculation in financial markets would be reinforced by fluctuations and uncertainty in real investment.
5. Structural uncertainty refers to the lack of information concerning the structure of the problem, and parametric uncertainty refers to the lack of information concerning the parameter of the problem. As Pirker [1992] points out, this distinction of Langlois [1984] is very similar to Knight's distinction between uncertainty and risk [see Pirker 1992, 72].
6. Game theory can only deal with parametric uncertainty, the states of the world being known, and the pay-

off matrix changing according to some probability distribution. Structural uncertainty means that the states of the world are unknown, and the pay-off matrix changes in an unpredictable way.

7. The definition of a public/collective good is not uniform in the recent literature. Here we understand public/collective goods as those goods to which the exclusion principle does not apply.
8. We want to distinguish "real" institutionalists from transaction costs institutionalists. "Real" refers to the fact that institutions are seen as social relationships [see Kanel 1985, 826] and not as a social order coming out of Williamson's transaction cost-minimizing, self-seeking individuals, as in Mandeville's fable of the bee [see Hodgson 1991, 154].

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