

Koch, Andrew M. and Gerhard Fuchs. (2000) "Economic Globalization and Regional Penetration: The Failure of Networks in Baden-Württemberg" *The European Journal of Political Research*, 37 (1) [January 2000] Published by Wiley-Blackwell. The definitive version is available at [www3.interscience.wiley.com](http://www3.interscience.wiley.com). DOI: 10.1023/A:1007061419588 (ISSN: 0304-4130)

## **Economic Globalization and Regional Penetration: The Failure of Networks in Baden-Wuerttemberg**

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### **ABSTRACT**

This paper explores the emergence of direct linkages between the international economy and the state government of Baden-Württemberg, Germany. In the early 1990s Baden-Württemberg embarked on a plan in which the laender government took the lead in organizing a large-scale, high technology project for the development of interactive television. Creating a 'network' between itself and major economic actors the laender government sought to enhance the economic development of the region. However, as the economic actors involved in the project questioned the economic viability of interactive television, they began to withdraw from the project. The project's failure demonstrates the incompatibility of political objectives with the economic goals of actors in a globalized economy. We conclude that as attractive as the network approach may be for regional and national governments, it is likely to be successful only where both sets of actors see the outcome as enhancing their respective priorities (political legitimacy and economic gains).

### **Introduction**

Much has been written in recent decades about the globalization of the economy. The standard treatises have focused on the increasing globalization of production and distribution due to rapid technological changes. Production and investment decision now take place within a global framework, with corporations defining their role and fuctions within a global context of trade.

Where does this leave the nation-state? Macro-level arguments suggest that the sovereign domain of the nation-state has been eroded as a result of these changes. Global

economic actors operate outside of the sovereign jurisdiction of any individual nation-state, in an environment in which few international constraints exist. Further, the linkage between economic performance of states and political leaders provides an impetus to national leaders to adopt performative economic values over other systemic values such as moral, pedagogical, or welfare norms. (Koch/Fuchs 1995)

This work is intended to augment that line of inquiry by focusing on what is happening below the macro-level of economic activity. The actual activities of the transnational economic actors is felt below the international, and even the national level of analysis. Globalization produces influences that also transform activities and relationships in regions and localities. This results simply from the fact of their location. As Peter Dicken, et.al, put it, “all transnational corporations are locally embedded simply because every activity must have a specific geographical location.” (Dicken 1994: 24.) The location of a transnational corporation in a specific local regime will produce effects within the local community.

Therefore, the impact of a transnational actor may be far more than simply in the area of economic growth. Local affiliations produce the potential for new types of administrative structures that brings together corporate and local administrative actors into a policy networks. This new type of structure may or may not be dependent on the policy making activity of the nation state government. With the same performative pressures on local political elites, strategies independent from national policy are not out of the question.

The focus of this paper will be on the direct linkages that were established between the local administration and the global economy in the German state (*Land*) of Baden-Wuerttemberg. Baden-Wuerttemberg occupies a unique place in the literature on globalization. It has developed a relatively self-contained regional economy and system of governance. (Amin/ Thrift 1994: 7) It is seen as representing a successful partnership among the state government, high technology industries, financial institutions, research institutions, and universities. (Wallace 1994: 68)

In the 1990's the state of Baden-Wuerttemberg embarked on a new project. The state's economic minister took the lead in creating a local/international network among high-tech actors for the development of interactive television. The plan ultimately collapsed.

However, this event is instructive in demonstrating the kinds of strategies and structures employed on a sub-national level in order to enhance regional economic performance.

After discussion the structural and strategic uses of networks on a theoretical level, this paper will examine the chronology of events surrounding the growth and decline of the network for the development of interactive television in Baden-Wuerttemberg. It is our contention that the network strategy failed because of the incompatibility of the goals within the economic and political subsystems. Economic and political elites operated with different performative measures of success and divergent objectives. They also operated within different environmental boundaries, boundaries that remained open for the economic subsystem actors. For the political actors, constraints within the political subsystem prevented compelling the cooperation of the economic actors dooming the project to failure once the economic objectives appeared unattainable.

Our conclusion is that the failure of the project in Baden-Wuerttemberg may point to the shortcomings of the network strategy in general. The kind of cooperation between business and government necessary for this kind of interaction may be less attractive to businesses in the new global context. Corporations increasingly identify themselves as global rather than national players. Globalization brings a new structural context in which the old “corporatist” strategy of intermediation (now in the language of “networks”) may longer have viability. For the network to function, both economic elites and political actors must see some benefit. Economic globalization may alter the calculation of corporations as to the rewards of such cooperation.

## **I. Baden-Wuerttemberg: From Success to Economic Stagnation**

As the nation state loses capacities to guarantee full employment and stable economic growth, and even considers these aims no longer to be among its main interest, the sub-national units try to fill the void. This occurs as the sub-national units become more active in the area of industrial policies and as they develop new policy measures (see Fuchs/Koch 1991). In the field of industrial policy the sub-national units are directly confronted with the effects of globalization.

In this context, Baden-Wuerttemberg has the reputation of an outstandingly successful regional economy. Since the 1960s, this region had higher economic growth rates, a higher export ratio and lower rates of unemployment than most other regions in Germany, as well as the rest of Europe. Baden-Wuerttemberg's post-war prosperity was enabled by a coordinated ensemble of regional economic structures and general institutional conditions.

The success was based on specialization in investment goods industries (cars, machines, electrical engineering) and on supporting institutions. The dual training system, regional research infrastructure, special transfer institutions, cooperation between unions and employers' associations, and the regional banking system were vital preconditions for the post-war prosperity in this German state. But since 1990 Baden-Wuerttemberg seems to be faced with problems similar to those of other less wealthy regions. During the last years, the region has been facing a stagnation of economic growth and a continuous decline of employment (cf. Heidenreich/Krauss 1996). Rising unemployment figures, increasing direct investment abroad by regionally based companies, a failure to attract foreign investment from abroad, and falling employment figures in the manufacturing industry, mark the limits of the previous production model. The region is now adjusting its position as it hopes to secure a place within a changing global division of labor.

There is a wealth of explanations for this relative turn in Baden-Wuerttemberg's economic development. The explanation most relevant (though not uncontested) in the context of our paper was first formulated at the end of the 1980's in a report of the IMU institute (Richter 1988) that pointed to some problematic aspects in the region's industrial structure. The IMU report argued that Baden-Wuerttemberg's economy was overly dependent on a very small number of rather traditional industries, in particular the automobile sector. The report predicted very harmful effects resulting from a foreseeable decline in these industries on Baden-Wuerttemberg (not due to a general down turn of the relevant industry, but due to an increasing global orientation of corporations like Mercedes Benz, Porsche etc.) as a whole because at the same time the region did not have a strong potential in sectors with a more promising future. It was concluded that in addition to industrial restructuring and lean processes, the region needed new forms of institutional learning to increase the regional innovation and co-operation potentials.

Although the pessimistic stance of the IMU report did not meet with much approval at the time of the report's publication, its line of argument has since been adopted by many important actors in the region, a process which was furthered by a crisis in Baden-Wuerttemberg's key industrial sectors from 1991 onward (Iwer 1991; Ifo 1995). There is now a high degree of consensus in Baden-Wuerttemberg that the region needs some structural change and that there must be significant growth in new innovative industries in order to compensate for the weak dynamics in the more traditional industrial core.

The prominence of automotive, mechanical and electrical engineering explains the higher than average growth of production, export and employment, the three factors which were the source of Baden-Wuerttemberg's post-war prosperity. However, this production structure may now prove an obstacle in adapting to new demands in terms of flexibility, innovation and economy. Firstly, established production structures and close-knit regional supply and service networks make it harder to tap into new market opportunities. Secondly, industrial companies perform the greater part of production-related services themselves; the question that needs to be addressed here is whether this high proportion of in-house services inhibits not only the development of the service sector, but also the specialization and optimization of company-related services (e.g. management consulting, development, marketing, software development, logistics and financial services). Thirdly, horizontal co-operation between companies in the same industrial sector is of minor importance in Baden-Wuerttemberg, so that synergy effects (e.g. through joint market observation and research and development activities) are not realized. These possible disadvantages, the existence of which would need to be investigated by means of further, predominantly qualitative studies, are balanced against the strengths of a technically advanced, diversified and internationally competitive industrial structure; competence in production technology is an important (if in itself insufficient) basis for continuous innovation and a high level of development productivity.

This production structure has been accompanied over the past decades by the establishment of a dense network of regional institutions. Research and development activities, vocational and advanced training facilities, industrial relations and financial services have made a substantial contribution to the success of Baden-Wuerttemberg's

production model. However, this institutional environment has become so firmly rooted that a lock-in approach is to be expected in the face of new demands.

In this context, the government of Baden-Wuerttemberg perceived that a coordinated effort is necessary to move the state into the high-technology sector. This transformation, however, was to result from the creation of new regional-international networks, not the rehabilitation of the old ones. Thus, a new set of rules under which the development strategy would take place, had to be established. Development with, what were now international actors, determined the conditions and the power relations within the emerging network.

## II. The Rise of the Network Model

The fact that a need for reorientation was perceived as a matter of urgency does not guarantee that a reorientation was to come about. The interesting question is: how do regional actors try to accomplish the economic restructuring they deem necessary? Efforts at the reorientation of a regional economy may have many different forms. We will distinguish three approaches to regional economic restructuring that correspond to the commonly-used typology of governance modes (cf. Williamson 1985; Powell 1990; Jorde/Teece 1990; Freeman 1991; Håkansson/Johanson 1993):

- The *market approach* relies on market processes to push, as an efficient co-ordination mechanism, the development of the region's industrial structure in the right direction. The aggregated action of mutually independent market participants provides for the restructuring of regional economies, whereas deliberate action by (industrial) policy is considered to be useless or counterproductive.
- The *hierarchical approach*, by contrast, stresses the need for state intervention or intra-organizational control to provide for the economic restructuring, which market forces cannot guarantee. Interventions by the state, using regulatory and fiscal instruments, or vertical integration within the confines of one organization (mostly, a large company) are the means for coordinating the restructuring process.
- The *network approach* emphasizes the importance of co-operative relations between autonomous regional actors. Neither the invisible hand of the market nor the visible hand

of the state but the coordinated actions of both private and public actors bound together by network ties accomplish the economic restructuring. Within this approach, there is a place for a particular kind of intervention by industrial policy, namely actions aiming to stimulate and support co-operation networks.

Of course these are ideal-types which only appear in varying blends in socio-economic reality. Interestingly, however, if industrial sociologists were to point to a region that came comparatively close to one of these ideal-types they often chose Baden-Wuerttemberg as an example of the network type.<sup>1</sup> Among the characteristics of Baden-Wuerttemberg they pointed to are the region's dense network of publicly funded research institutions and the region's well-established inter-firm networks. Following this interpretation, Baden-Wuerttemberg's exceptionally well-developed network ties explain much of its success in the past.<sup>2</sup>

It is important to note that the network approach represents both a strategy and a structure. Presupposing the claims of Niklas Luhmann, that society is made up of functionally independent subsystems (Luhmann, 1995), the network approach seeks to bring together two or more subsystems into a common objective. As a structure, the network approach seeks to build linkages across two or more of these autonomous subsystems. As a strategy, it is a means of coordinating policies and outcomes in a way that the values or two or more subsystems can be attained simultaneously.

Baden-Wuerttemberg's sought to use the network approach in an effort to cope with the present challenge of economic change, using the political subsystem in order to coordinate economic actors to achieve both political and economic objectives. The state was particularly sensitive to claims that it was too directive of the project so it tried not be too intrusive into what were largely considered matters for the economic system. The political system viewed its task as one of an "agent" that brings together people with common interests, supports a decision making process aiming at a consensus between the participating actors, and finally provides support for a quick implementation of the consensus. The

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<sup>1</sup> See, among others: Sabel et al. (1991); Schmitz (1992); Semlinger (1994); Cooke/Morgan (1996)

<sup>2</sup> This interpretation is not undisputed. Critics (see, among others: Braczyk et al. 1995; Kerst/Steffensen 1995; Heidenreich/Krauss 1996) have questioned the argument that inter-firm collaboration is exemplary well-developed in Baden-Wuerttemberg and have called for a more differentiated view, distinguishing between co-operation in different sectors and co-operation on a horizontal or vertical level.

political systems objectives of full employment and social stability could only be accomplished by use of an economic strategy.

From the state's perspective multinational corporations seemed best suited for attaining the state's economic objectives. Regionally based corporations were not considered to be innovative enough, lacking the strong "high-tech" research and development programs of many multinationals. However, such a strategy by the state is not without its accompanying risks. As we will argue below, by enlisting global economic players the state is at a disadvantage when it comes to influencing the economic actors. The multinationals have a much larger boundary in which to operate, effectively nullifying political influence in their decisions.

### **III. The Project Begins: "Interactive Video Services Stuttgart" as an Innovation Network**

Around the turn of the year 1993/1994 Baden-Wuerttemberg's ministry of economic affairs, in talks with managers of major regional corporations, developed the idea of a pilot project in the Stuttgart region. The project, which later was named "Interactive Video Services Stuttgart (IVSS)", was supposed to demonstrate in a field trial the new possibilities of interactive television (iTV) and aimed to induce co-operation among regional and international actors to develop new iTV-related products. Initiated by the ministry, an organizational network was formed which was to realize the IVSS project. At the center of this project network was a group of companies which initially consisted of *Deutsche Telekom*, providing the telecommunications network, and *Alcatel-SEL*, *Bosch Telecom*, *Hewlett Packard* and *IBM* (which later quit the project), each of them in charge of developing different elements of the trial system.

All of these corporations are global players but they are represented in the Stuttgart region with important production, research or administrative units. While the core of the project network consisted of these corporations and the ministry of economic affairs, additional actors were connected to the network, although holding more peripheral positions. The wider network consisted of other technology providers (subcontractors of the companies named above like Sony and Sybase), service and content providers, and a number of public



research laboratories. Given the participation of the ministry and of the public research institutes, the IVSS network may be called a public-private partnership. However, the private actors were functionally more important than the public ones.

The spatial point of reference of the project was the region of Baden-Wuerttemberg where most of the key actors (the *Land* government, many of the involved companies and other institutions) are based. Dieter Spoeri, minister of economic affairs between June 1992 and May 1996, repeatedly stressed the strategic importance of the IVSS project to the economic future of the *Land*. He considered it to be a major opportunity for Baden-Wuerttemberg's economic players to reach an advanced position in a promising new technology, allowing them to export their products to other regions and to create new jobs or maintain existing ones. He presented the project as a major element in the government's strategy for economic renewal, aiming to strengthen the multi-media industry in Baden-Wuerttemberg, which he considered to be a sector with good growth prospects in the years to come.

In the IVSS project, the ministry of economic affairs' foremost part was that of an initiator. While the ministry also contributed to the funding of the project, about two thirds of the financial means were to be provided by the participating companies (some additional money came from the European Union's research program "Advanced Communications Technologies and Services" [ACTS]). Minister Spoeri did not claim his ministry had superior knowledge about the technological strategy regional corporations should follow (he did not contest, in principle, the functioning of market processes). However, he stressed the need to accelerate the adoption of new technologies through regional companies by stimulating cooperation between them and by helping them to develop new products. In the role of initiator, the ministry sought to enhance the state's political objectives of stimulating employment, producing economic stability and regional growth. These are political objectives, as the market objectives are primarily concerned with the economic viability of the project, a return that can only be achieved globally.

By offering economic incentives and a favorable political climate the state government sought to enhance the likelihood that a project that could be pursued anywhere, would find itself located within this region. Under such conditions, the corporate actors had little disincentives to pursue the research and development in Baden-Wuerttemberg,

providing the projects economic viability remained positive. In particular, the project was supposed to provide an opportunity of testing the readiness of consumers to pay for interactive TV.

Clearly Spoeri emphasized a network approach to innovation and economic restructuring. He believed that neither the hierarchical approach nor the mere reliance on market processes would produce the desired outcome. Spoeri's view was that the discursive design employed by the network approach would produce the best results. The partners in the IVSS project worked on the plan for the pilot project for almost two years before they signed a contract in December 1995. The trial design they agreed upon implied that 2500 households (first, 4000 households were envisaged) in the Stuttgart region were to test the new iTV programmes and services. The content would be stored in digital form in a central server and would be transmitted via fiber and cable television networks to the households who would use or view it by means of a set top unit (STU), a special remote control and a regular TV set. The first service to be tested was supposed to be interactive video on demand.

From the start, the project struggled with various technical and organizational problems and the launch of the trial had to be postponed several times. According to the last time schedule, which was valid until October 1996, the trial was to begin in autumn 1996. However, at the end of October 1996, *Deutsche Telekom AG* announced its withdrawal from the project. According to *Deutsche Telekom*, the technical system provided by the consortium of hardware suppliers did not function satisfactorily. The company did not accept another extension of the deadline for the provision of equipment but declared the joint project finished. The ministry of economic affairs immediately accepted *Telekom's* decision and stopped the whole IVSS project.

The market incentives were not strong enough to continue the project. The demand for interactive television had been eroded by the Internet and new technological possibilities provided by digital television transmitted by satellites. The continued investment of resources in a technology with an uncertain return no longer made sense to the economic actors in the project. The ministry found itself still in want of achieving its objectives, but within the global economy the economic pressures for competitive technologies was simply too great.

#### IV. The Lure of the Network Strategy

Most of the existing literature stresses the benefits of the network approach, so before we offer criticism it is important to explore the strengths of the network strategy. What do networks offer that enables them to be a mechanism of coordination with very specific strengths in creating innovations when compared to other modes of governance? Drawing on the existing literature<sup>1</sup>, the answer would point to the networks' ability to combine the expertise of various actors, to stimulate cooperation between them, to reduce the amount of uncertainty confronting the actors, to create mutual trust and to facilitate learning processes.

Two driving forces pushed the network strategy: the desire of the state government to attract and develop a high technology industrial base and the need to combine the competencies of different actors in the field of high technology. In the case of interactive TV, an organizational structure depends on a very complex value chain, reaching from hardware and infrastructure over software and content to service provision. Hardly any single company has command of all the relevant competencies.

There was the perception that in the case of IVSS neither market nor hierarchical mechanisms would have been ideal to enable the realization of the new technical application. The market mechanism did not suffice because much of the technical development could only emerge through a joint effort. Among other things, the project required the development of a new architecture for the bi-directional transmission of broadband signals over hybrid fiber-coax networks. This could only be performed in a multilateral engineering process, involving different producers of telecommunications hardware and *Deutsche Telekom AG* as the network provider. The task was too complex to be performed by any one of these companies just buying a few specific elements of the system. It demanded a constant process of joint problem solving. Moreover, the envisaged large number of participants in the trial demanded organizational efforts which made the collaboration of various actors necessary.

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<sup>1</sup> Among the more important contributions are: Camagni (ed.) (1991); Freeman (1991); Gelsing (1992); Saxenian (1994); Kowol/Krohn (1995); Coombs et al. (eds.) (1996).

Hierarchy as a solution was clearly excluded, too. The state as a hierarchic authority hypothetically might have prescribed the companies what to contribute to the project but this would have contradicted the principles of a market economy both the federal and the *Land* government adhered to. For financial reasons to have a project of such magnitude, complexity and high risk be performed by one single private company was also unrealistic. The perception was that the network model does best fit the particular conditions relevant to Baden-Wuerttemberg.

Networks are functional in producing technical innovations only if they stimulate cooperation and collaboration between the actors belonging to the network. To what extent was the IVSS network successful in this respect? On the one hand, it is true that the IVSS project succeeded in organizing a joint process of engineering. Employees of different companies collaborated quite closely in developing the technical system to be tested. Some of them even temporarily took their place of work in one of the partner companies in the network. In the end, this collaboration succeeded in solving many emerging problems and in producing a technical system that could be offered to *Deutsche Telekom*. Unfortunately still, according to *Telekom*'s official statement the technical system did not function satisfactorily.

Each innovation network is characterized by a specific balance between intra-network cooperation and extra-network competition. Early plans to engage Microsoft as a supplier of server software met with objections from some of Microsoft's competitors engaged in the project. As the examples of *IBM*'s withdrawal in the first period of the IVSS project and of *Telekom*'s decision which finished the project showed, problems of cooperation among critical suppliers can doom a project at any time. While it should be noted that market competition among the participants was not the major reason for the failure of IVSS, it did play a role.

Still, the network approach as a strategy remains attractive, as it seeks to provide a mechanism by which a coordinated effort can be launched that can achieve both political and economic objectives. The sovereignty of state actors plays only a background role, as one of facilitation rather than direct control. This maintains the political commitments to both democracy and free enterprise within the Western development model, but also provides clues as to the problem with the network approach within a globalized economic subsystem.

## **V. Problems with the Interactive Television Project in Baden-Wuerttemberg: Technical and Structural Complexity within the Economic Subsystem**

On a practical level, networks have the potential for stability. However, there are limits. Typically, network members use the option of “voice“ (Hirschman 1970) if there is discontent they wish to express. But due to the open character of the network, the “exit“ option is available if discontent is too serious (cf. Kowol/Krohn 1995: 100). The exit of major network members at least necessitates a time-consuming reorganization of the whole network but in the worst case causes the network to collapse altogether. On the one hand, the exit risk is highest in the early period of the network, before contractual agreements and investments in network-related assets make the decision to leave highly expensive for the respective organization. On the other hand, as *Telekom*‘s decision demonstrates, network members may withdraw even after devoting significant investment to a collaborative enterprise (to be sure, even higher investments would have had to follow), provided there are some strong reasons against continuing that project.

The complexity of the technological system entailed a constant need for mutual information. The high degree of interdependence between system elements (server technology, transmission technology, technology of end-user devices), the large number of companies involved and the fast progress in the technology of iTV meant that big and permanent efforts had to be made to guarantee all the participants had the knowledge necessary to produce their contribution to the trial system. Technological complexity had to be managed by appropriate organizational means, within the participating organizations as well as between them. Project organization and management became extremely important tasks. In this respect, however, the IVSS project certainly was in need of improvement. What seemed to be lacking was a central project manager effectively co-ordination the various project lines.

In addition, problems arose because the company divisions engaged in the project permanently had to co-ordinate their actions with their mother companies. For instance, the regional divisions of *Deutsche Telekom* had to make sure their behavior in the IVSS project was in line with the general strategy of their headquarters in Bonn, and the managers of *Alcatel-SEL* in Stuttgart had to take into account the will of their Paris head office. Even if the individual employees of one company involved in the project were willing to collaborate

with employees of another, the top management of one or both companies was sometimes more reluctant to agree to the collaboration. The need for multi-level coordination significantly complicated and slowed down the process of problem solving in the IVSS project, a problem which is quite common to innovation networks (see, for example: Häusler et al. 1993).

Another latent problem that manifested itself during the project was the conflict between the companies' interest in cooperation and their concern not to give away too much proprietary know-how and too many marketable assets. (cf. on this problem: Teece 1986; Chesnais 1988) Problems arose because technology providers at various stages of the project refused to make public technical specifications of the system elements they had developed. For instance, there was a conflict between the technology providers who wanted to keep secret the technical details of the content preparation (programming, encoding and compression) process and the content providers who wanted these specifications to be published. While the former wanted to monopolize the preparation of content as a marketable service, the latter wanted to have a choice between different suppliers.

The IVSS project faced an extraordinarily high degree of external uncertainty. Parts of the technological system to be tested really were, and still are, unknown territory. The complexity of the technology for interactive TV over hybrid fibre-coax networks has often been underestimated in the public debate, which until recently was characterized by considerable enthusiasm. Some technology providers did their bit to foster this enthusiasm, publishing overly optimistic statements with regard to the prospects of interactive TV. Until today, however, no system for interactive TV with the technical configuration of IVSS has successfully been realized with large numbers of participants anywhere in the world. In addition to the technical difficulties, the marketability of iTV programs and services still is hard to predict. The decision of *Deutsche Telekom* to finish IVSS must be seen on the background of this high level of uncertainty.

All these (and more) problems made coordination in the IVSS project quite time consuming. While the members of the IVSS network were struggling with the task of developing the trial system, the political, technological and economic environment of the project changed profoundly. During that time, a new government was elected in Baden-Wuerttemberg, and the new minister of economic affairs did not identify with IVSS as

strongly as his predecessor. Moreover, digital video broadcasting (with no, or low-level interactivity) and Internet services became technologically more mature alternatives to interactive TV, and experience from US trials of iTV led to more pessimistic expectations about the market potential of this application.

One of the major problems in developing a successful network strategy is the coordination of a shared set of objectives which can motivate the development of a shared vision and strategy among network members. A network must produce the perception that all the participants are working toward the same goal. This is a demanding criterion, and without any doubt the IVSS project did not come up to it very well. For a long time in the history of the project, there was not very much clarity on the exact kind of application that was to be tested<sup>1</sup>. In addition, there hardly seemed to be a common understanding among the network members of the features that would make interactive TV attractive to its future users.

However, it is our contention that the contrast between the intended state goals, which were essentially extra-market oriented objectives, and the market oriented objectives of the corporate participants produced a climate in which the formulation of a shared set of objectives was difficult, if not impossible, to achieve. This contrast in objectives led to very specific areas of conflict as the project moved forward. The ministry of economic affairs, for instance, had an interest in a broad scope of the trial. The ministry wanted the trial to represent a major effort within a strategy aiming at regional economic restructuring, and this could be argued with much more plausibility if business *and* residential users were included than if the trial was limited to the latter. Given the technical problems with addressing both groups, the technology providers within the network were much less inclined to connect companies or schools to the trial. In the final analysis, neither the ministry, nor the technology suppliers or the network provider made a strong and consistent effort to convince all the other partners in the project of an unequivocal strategic vision everybody should

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<sup>1</sup> Symptomatically, different names were used for the project. In the beginning, the project was officially entitled “Multimediale Dienste Baden-Wuerttemberg“ (multimedia services Baden-Wuerttemberg), but more often referred to as the “Datenautobahn-Projekt“ (data-highway project), both notions indicating a broad scope of the project. Only later, IVSS was chosen as a more specific project title.

follow. The IVSS project lacked a central mobilizing actor who successfully would have advertised a clear project vision<sup>1</sup>.

All of these problems could have been overcome, however, if the impetus behind the development of interactive television was likely to produce an economic payoff. Its future, however, appeared uncertain. At this point, the contrast between the market interests of the global corporate actors could not be reconciled with the interests of the Baden-Wuerttemberg government. There is no incentive for a global actor to pursue an economic strategy that contains little or no certainty of an economic reward. This incident demonstrates the fragility of attempts to involve global actors in networks that are regionally motivated and constructed.

## **VI. Theoretical Problems with Networks in the Globalized Economy**

As attractive as the network approach is in theory, it has severe limitations in practice. The network structure that is created is “artificial” in the sense that it is not an autonomous substructure that competes with economic and political forces, but is itself dependent on the goals and norms of those independent systems. To use Hegelian language, a synthesis of economic and political objective is never created, thus no new values that superced those of the political and economic subsystems emerges. Lacking a political mechanism that can compel cooperation in what is now a global economic environment, the political agenda sponsored by the state remains at a severe disadvantage.

States seek systemic legitimacy through performance in a variety of areas. One of the most prominent areas of measurable performance will be in the economic sphere. It is, therefore, in the interest of state leaders to promote economic growth and development, full employment, stable banking, etc. through legislative and executive action. All of this is to be accomplished, in the case of Germany, within the parameters of democratic norms and practices.

The structural advantage maintained by the state in the pursuit of its objectives is that of sovereignty. Sovereignty is a concept that attributes to the state the potential to exercise

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<sup>1</sup> On the important role “mobilizers“ play in building up the cognitive prerequisites of co-operation in networks,



complete control over the activities within a given territory. Within the modern nation-state system the fact of sovereignty has provided the state with a distinct advantage in seeking to regulate and control the activities of other subsystems within a given territory (be they economic, social, religious, artistic, etc.). The fact of sovereignty, and its ability to influence the economic subsystem is what made the “corporatist” form of intermediation (both in its positive and negative forms) possible in the early and middle Twentieth Century.

The actors within the economic system lack sovereignty in the traditional sense. Multinational corporations do not have the ability to exercise formal powers over territory, beyond that of ownership. Within a strong nation-state system this has the effect of establishing a relationship between the state system and the economic system in which state can exercise some control over the achievement of their systemic objectives. It is a matter of self-interest for the economic actors who also pursue their own systemic objectives. For a company that is embedded solely within the national substructure, that health of the state cannot be separate from the health of the corporation.

With the globalization of the economy, the condition changes. Prior to economic globalization the functional boundaries for the political system and the actors within the economic system were largely the same. Globalization releases the actors within the economic system from dependence on the health of any individual state.

Lacking any coherent notion of sovereignty, the penetration of the economic system by the political system is limited to enforcement of the “rules of the game.” Individual states enforce a general structure that maintains the effective functioning of the economic system across nation-state boundaries. This constitutes a hybrid condition. Enforcement is a political act, but the content of the rules constitute an economic imperative. The result of this condition of economic globalization is that the nation-state is no longer effective in the pursuit of its agenda at the expense of the imperatives from the economic sector.

The different functional boundaries for the economic and political subsystems is only part of the problem with the network approach. The political and economic systems have different operational values that direct their activities. In the most general terms, states seek security, public health and welfare, economic performance, judicial competency, as well as other system level goals. For the political system, however, these are secondary components

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see Mandell (1989), Lütz (1994).

enhancing systemic legitimacy. In its crudest form, a market economy knows one generalizable systemic goal, profit. Globalization has not change this value for the economic system, it has simply altered the arena. However, by extending the boundaries in which profit is pursued, the relationship between the political and economic systems found within the modern nation-state system has been changed. Where once nation-states could exert considerable influence over domestic economic actors they are now forced to compete for the benefits of economic activity.

The network approach acknowledges the structural aspects of globalization without appreciating the alteration that has occurred with regard to the power relations between the economic and political subsystems. As the failure of the network for the construction of interactive television in Baden-Wuerttemberg suggests, economic and political systems have different goals and agendas. Legitimacy and profit represent two very different values. Global economic actors also have a much wider array of boundaries in which to operate. They can coordinate with national, regional, or local political systems, but are not tied to any specific domain. All of this results in a condition in which individual nation-states find it much harder to replicate the conditions of their own continuing stability.

## **Conclusion**

The failure on interactive television is instructive for an observer in terms of what it could not accomplish. The attempt by the Laender government to coordinate the efforts of major multinational business enterprises in a way that promoted both economic and political subsystem values reveals the problems of the network strategy in general. The network strategy represents a hybrid of the old corporatist concept of state sponsored economic activity toward what are essentially political objectives. This approach fails to recognize that at the end of the Twentieth Century the globalization of the economy has created conditions in which a framework dominated by the presupposition of sovereign nation-states as “the” international actors has disappeared.

Global trade is not new. Spanish, Portuguese, British, and Dutch merchants traded internationally for centuries. What is unique about the economic activity at the end of the Twentieth Century is that trade is taking place in a new context. This new context has been

made possible by advances in communications technology and the related developments in the computer industry. “Technology enables firms within an industry to capture economies of scale and scope by going global; global firms rely on technological innovation to enhance their capabilities. Technology is thus both driven by, and a key driver of, globalization.” (Bradley/Hausman/Nolan 1993: 3) A new fusion of information technology and telecommunications is occurring that is having a radical effect on the structure of international trade and commerce, altering the relationship between the economic and political subsystems that had emerged in the Seventeenth Century and had lasted until recent times.

The activities surrounding IVSS also demonstrated the permeability of the nation state to penetration by multinational economic actors on a regional and local level. The state government took the lead in coordinating economic activity. While this is in part due to the federal structure of the German constitution, it also demonstrates the unimportance of the central sovereign authority in economic negotiations. The corporate ethos retains a flexibility in adapting to structural differentiation in the pursuit of its objective. Corporations are also not encumbered by the democratic process as the ethos of their existence. To the extent the markets are open, business can pursue its objective (profit) through any form of decision making process that its governing board considers appropriate. With popular democracy states do not have such a luxury.

There can be no doubt that the changes occurring as a result of economic globalization will generate a change in the nation-state system. It may be that Ian Angell is correct in suggesting that global capitalism reduces the state to just one among many enterprises competing for loyalty. (Angell 1996) The effect is that the state increasingly adopts the character of an outmoded “sentimental” institution with no connection to the new class of elites.

It is too early to say where these dynamics will lead with any certainty. What occurred in Baden-Wuerttemberg is instructive in demonstrating that the context in which states coordinate their economic activities has changed and those changes may have altered the possibility of success. One example does not necessarily indicate a general conclusion. However, we have tried to demonstrate that it is plausible to make such a claim. Future research may provide more conclusive answers.

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