

**Europe and the reform of national regulatory institutions: a comparison of
Britain, France and Germany¹**

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Regulatory institutions offer a powerful means to coordinate firms with other actors, notably state actors, and hence create institutional advantages. They can take different forms, thereby offering sectoral equivalents to ‘varieties of capitalism’. Their reform raises important issues about whether and how nations with diverse institutions respond to common pressures for change.

This paper examines how and why sectoral regulatory institutions in three countries in Europe have been reshaped in the face of European integration. In particular, it investigates the implications of the development of supra-national regulation that is based on a ‘liberal market economy’ model of regulatory institutions and runs counter to other coordinated or state-led models. It thus offers a discussion of regulatory reform and the impacts of supra-national developments on different ‘varieties of capitalism’ at the sectoral level.

The paper studies regulatory institutions that coordinate ‘national champion’ firms and national governments in ‘network industries’ - telecommunications, stock exchanges, energy, railways, airlines and postal services. These are economically and politically vital industries. Moreover, they present sharp examples of the coordination problems between governments and firms, and different models of regulatory institutions to respond to those problems..

Three countries used as examples of different ‘varieties of capitalism’ – Britain, France and Germany- are compared. By the late 1980s, network industries in the three offered a prime example of how nations enjoyed different institutional complementarities arising from formal and informal institutions, ones that were consistent with those predicted by the Varieties of Capitalism literature in other sectors. Britain had moved towards a regulated competitive model of coordination, France a state-led one and Germany an industry-led one.

Until the 1980s, there was little European integration in network industries, but thereafter European integration has taken place, notably through the development of detailed EC sectoral regulation as well as greater application of general EC competition law. Within this new EC regulatory framework, governments radically reshaped formal domestic regulatory institutions. In Britain, this took place without much reference to Europe, but in France and Germany the new European context provided an essential force for change through a combination of new pressures,

opportunities and legitimation for reform. The reforms of formal institutions not only broke with the past but also led all three nations towards a competitive regulated market (albeit at different speeds and to diverse extents), weakening traditional coordination mechanisms in France and Germany. However, informal institutions, especially the role and rhetoric of elected politicians remained very different. The result is thus the evolution of formal regulatory institutions of coordination between governments and firms towards LME-type regulatory structures across different nations but the maintenance of diverse informal ones.

The paper begins with a brief summary of the institutional position from the mid-1960s until the mid-1980s. It argues that there was increasing divergence among the three countries, leading to diverse institutional complementarities that largely followed those to be expected from a 'varieties of capitalism' model. It then sets out the development of EC sectoral regulation, which ran counter to the institutional frameworks and relations that had developed in France and Germany. Finally, it looks at reforms in the three countries, both formal regulatory institutions of ownership, rules governing competition and the allocation of regulatory powers, and informal rules and norms that actors generally follow (cf. Hall and Soskice 2001b:9).

I Regulatory institutions, coordination and institutional complementarities

The 'varieties of capitalism' literature emphasizes the importance of relationships for firms, and the development of institutions for coordination of firms and other actors (Hall and Soskice 2001a). A key relationship is that between firms and governments. The two sets of actors are highly inter-dependent and hence need to coordinate their actions or at least can benefit from so doing. However their relationship faces many problems such as different time horizons, pressures, commitment, trust, objectives and incentives.

Interdependence between governments and suppliers and problems in coordinating their actions are particularly acute in network industries.² At least five reasons can be given. First, these industries require largescale capital investments, which then generate returns over long periods- often 20-50 years. Once networks are built, investors face the danger of 'expropriation' of returns through government price controls or other regulation. Governments face problems of 'credible commitment' vis-à-vis private investors, as their promises over lengthy periods of time lack credibility (cf. Levy and Spiller 1996; Gómez-Ibáñez 2003). Second, network industries are often essential for the lives of citizens and politically salient. Citizens- who are also voters- seek both good services and low prices. Hence governments are often under considerable pressures to ensure low prices, at least for residential users. This may mean damaging the profits of suppliers and/or using business users to cross-subsidise residential users. Third, there are major externalities in network industries. Key examples that are highly relevant for governments are pollution, congestion, regional development or broader economic growth. Hence the decisions of network suppliers can have important consequences for governments that will not be reflected in market prices without specific sectoral regulation. A fourth problem is that most

² For economic analyses of network industries, see for instance, Vickers and Yarrow 1988, Newbury 1999, Armstrong, Cowan and Vickers 1994; for legal analyses, see Prosser 1997, 1999.

network industries are in whole or part natural monopolies or at best oligopolies. Hence suppliers have market power and can drive up prices above marginal cost. Moreover, monopoly means that even if part of a network industry can be open to competition- usually services- those suppliers face monopoly providers (usually of the infrastructure on which they must supply their services). Introducing new technologies represents a further issue. They can offer remarkable advantages for governments, citizens and suppliers. However, they also often involve the definition of standards: suppliers need to adopt a common standard to allow interoperability of equipment and services, but these standards can create de facto monopolies. In addition, large scale investment in new technology raises problems of coordination of several interdependent actors with conflicting interests and of risk. In particular, infrastructure suppliers, equipment manufacturers, users and service suppliers need to invest in the new technology, but each is dependent on the others for its successful implementation. Thus for instance, manufacturers depend on network providers to establish the network, while users and service providers want to be reassured that the infrastructure will be available at the appropriate price, quality and time. Yet network providers fear being prisoner of proprietary standards and equipment suppliers. Finally, there are major problems about information asymmetries between governments and suppliers. Network industries are highly technical and problems are worsened if there is a monopoly or oligopoly, which limit independent sources of information and comparators.

Potentially, there is an almost infinite number of regulatory institutions to respond to these coordination problems. However, for simplification, five are particularly prominent in Europe concerning ownership, monopoly, rules governing supply, allocation of regulatory powers and informal linkages between suppliers and the state. Although potentially a very high number of combinations of these institutions are possible, there are strong complementarities between different institutions- for instance, between competition and the allocation of powers to an independent regulatory agency. For simplification, three stylised models can be set out that are highly relevant for Europe.³ No country conforms totally to one, but they provide a yardstick to measure the degree of change over time and to both compare across countries in regulatory institutions at the sectoral level.⁴ Moreover, they offer a sectoral equivalent to the national models developed by Hall and Soskice (2001a) and Vivien Schmidt (2002). Each model combines formal and informal regulatory institutions that complement each other.

The first is an industry model of coordination. Formally or informally regulatory powers lie with the industry or industry associations. The industry sets standards and ensures coordination over matters such as developing new forms of equipment or investment programmes. This involves close linkages between network and service suppliers and equipment manufacturers, either through vertical integration in one company or close formal and informal mechanisms for cooperation ranging from industry standard setting bodies to common recruitment of an elite group of managers. Suppliers, especially infrastructure suppliers, are publicly owned and enjoy broad monopolies. Whereas the industry has strong networks, it has a considerable relational

³ The three models are not exhaustive- for instance, the industry-led model has an interesting variant, seen in some US networks, of privately-owned industries with an independent regulatory commission.

⁴ For a similar analysis based on airlines, see Lehrer 2001, although he focuses more on the internal workings and commercial of suppliers than regulatory institutions.

distance from governments- for instance, through its top managers being recruited from different socio-professional groups. Strong informal norms exist that the state will follow the industry's lead. Thus the regulatory institutions aid in dealing with problems of credible commitment and innovation by allowing industry actors to lead and largely excluding the government from many policy decisions. However, public ownership is designed to ensure that monopoly positions are not abused, externalities are taken into account and profit-seeking private companies are not able to exploit information asymmetries to evade regulation .

The second model of coordination is a state-led one. Here network suppliers and sometimes equipment suppliers are publicly owned and the former have a monopoly over supply to final users. Programmes for investment and the development of new equipment and services are planned by state officials and funded by the state or by state-guaranteed borrowing. State officials lead coordination between service suppliers, infrastructure operators and equipment manufacturers. Equally regulatory powers both legally and in practice lie with the state, which decides matters such as choice of technology and standards to investment and pricing levels. Government officials have strong informal networks with suppliers and the major policy making norm is that they are closely involved in almost all major decisions in the industry. Thus a combination of public ownership, monopoly and a central role for governments is used to coordinate diverse actors, prevent private exploitation of monopoly and take into account externalities.

A regulated competitive market offers a third institutional model of coordination. Here the government operates at arms length from suppliers who are privately owned. This involves little government role in the internal workings of suppliers. However, competition is allowed. This does not mean disengagement by the state as a whole. Instead, detailed formalised rules may cover a host of matters such as prices, quality or universal service. Typically these rules are largely set and enforced by independent regulatory agencies. Coordination between firms occurs through competition. Thus infrastructure suppliers choose equipment manufacturers freely rather than being tied to selected long-term partners. Equally, decisions about investment and new technology will be made by privately-owned suppliers. Key norms are ensuring 'fair and effective competition' and for firms, maximising profits and stock market valuations. Coordination takes place through competition and rules governing supply that seek to maintain or mimic a competitive market. Thus the industry has many of the features of competitive sectors in liberal market economies.

II Diverse national reform paths for regulatory institutions: mid-1960s-mid-1980s

A well-established European 'model' that was close to the industry model of coordination existed in network industries in the late 1960s. In most sectors, publicly-owned suppliers enjoyed legal or de facto monopolies over the supply of infrastructures and most services. Examples included the Direction Générale des Télécommunications (DGT)/La Poste, the Post Office and Deutsches Bundespost for telecommunications and postal services, Electricité de France (EdF) and Gaz de France (GdF) in French energy, British Gas and the Central Electricity Generating Board (CEGB) in British energy from the early 1970s, British Rail, Société Nationale des Chemins de Fer (SNCF) and the Deutsches Bahn for railways and British Airways,

Air France and Lufthansa in airlines. Suppliers frequently had a special status, either as part of the civil service or sometimes as special forms of public corporations, sometimes subject to public rather than private law. They had close formal and informal links with governments and with national equipment manufacturers, who were often privately owned (for instance, Siemens, Alcatel, GEC). Regulatory powers were almost entirely in the hands of governments as there were no sectoral independent regulatory authorities and general competition law was not applied to public sector monopolists.

A mixture of formal and informal norms governed policymaking. The *raison d'être* of public ownership and monopoly was to provide a public service, sometimes formalised as a judicial doctrine of 'service public'. Key elements included supplying services across the country, even when this meant providing loss-making services, and protecting poorer users. Thus another related element was cross-subsidisation-between services and also between types of user; typically, business users cross-subsidised residential ones. Suppliers such as EdF/GdF or the Post Office often developed their own organisational cultures, taking pride in their delivery of a service, far-removed from (and indeed often in opposition to) the aim of making profits. At the same time, suppliers formed part of national industrial policies. Their orders were aided and promoted privately-owned equipment manufacturers; they themselves developed long-term technologies such as nuclear power or digital switching. Finally, politicians used publicly-owned suppliers for short-term political and economic policies such as maintaining employment, reducing inflation or as part of fiscal policy.

Table 1 Summary of European model of regulation in mid-1960s

Institutional feature	
Ownership	Public
Supply	Monopoly
Allocation of regulatory powers	Governments
Rules governing supply	Few formal rules, except those of the general public sector
Relations between governments and suppliers	Close
Norms over objectives of suppliers	Public service; fiscal and political aims of governments; long-technological and economic development

From the mid-1960s onwards, this general European ‘model’ faced a number of pressures for change. Technological and economic developments began to transform many network industries. Their introduction often required high capital investment in projects such as digitalising telecommunications networks, setting up nuclear power plants or creating high-speed rail networks. Demand for services such as telecommunications, energy and airlines rose sharply. Domestic dissatisfaction grew as supply failed to follow suit. The traditional European model was questioned- in part as new economic ideas developed that challenged natural monopolies, but also as the US restructured industries such as airlines or telecommunications, offering a powerful example of a competitive regulated market. Faced with these pressures, Britain, France and West Germany took different paths in institutional reform (for a good overview and several cases see Hayward 1995).

Britain moved furthest away from the traditional European ‘model’ towards a regulated competitive market. During the late 1960s and 1970s, British policy makers were often unable to coordinate government policies, state suppliers and private equipment manufacturers. Public services suffered from increasing problems in the 1970s- reduced investment, increased prices to ensure profitability, loss of public esteem. The 1980s saw dramatic reforms in Britain. First, most publicly-owned suppliers were privatised (eg British Airways, British Telecom, British Gas and most of the electricity industry). Second, independent sectoral regulators were introduced- Oftel for telecommunications, Ofgas for gas, Offer for electricity. Finally, competition was permitted. Initially, it was limited- for example, being restricted to advanced telecommunications services or large energy users. However, the aim was to extend competition. The norms of policy also altered: from public service to the promotion of fair and effective competition; towards cost-based prices, with cross-subsidises being regarded as anti-competitive; towards formalisation of the requirements placed on suppliers, through licences, ending short-term ‘intervention’ by elected politicians. It is however noteworthy, that privatisation and competition were accompanied by greater regulation- ie ‘more rules’, notably over licensing, pricing, interconnection (cf. Vogel 1996).

In contrast to Britain, France followed a state-led coordination strategy, best known as one of ‘*grands projets*’ in several network industries including telecommunications, electricity and railways (Cohen 1992). Policy makers sought to closely-coordinate the decisions of public network suppliers, private equipment manufacturers and governments for long-term objectives. The public suppliers developed new technologies such as nuclear power, the high speed train (Train à Grande Vitesse- TGV) or digital switches, in close cooperation with equipment manufacturers. They enjoyed long-term spending programmes that allowed planning and provided a large domestic order base. French firms sought to develop world leads in these new technologies and hence hoped for exports of equipment and expertise. Within France, consumers were to benefit from high quality, modern technologies. Programmes were largely financed through borrowing by the state-owned suppliers, backed by state guarantees. The leadership for *grands projets* was provided by the state- both directly by the government and indirectly through the *grands corps* whose tentacles stretched across public and private sectors.

Between the mid-1960s and the mid-1980s, West Germany largely followed an industry model of coordination in most network industries. On the one hand, close

long-term relationships existed between the publicly-owned suppliers and the private equipment manufacturers. On the other hand, powerful state leadership was lacking. Thus West Germany did not develop large-scale industrial projects in areas such as nuclear power or telecommunications. Instead, it relied on high quality equipment and innovation produced by the privately-owned equipment manufacturers. Moreover, attempts to alter the status of publicly-owned suppliers- for instance making the telecommunication side of the Deutsche Bundespost or the Deutsche Bundesbahn, into private-law companies, were unsuccessful and were dropped as they failed to achieve consensus among political parties and with the trade unions. Instead, problems with public services were usually dealt with through a combination of extra public funding and cooperation between the public and private suppliers.

III EC regulation and the Single Market

Until the mid-1980s, the EC was largely absent from the regulation of network industries.⁵ Almost no EC sectoral regulation was passed. Moreover, EC general competition law and rules on state aids were almost never applied to these state monopolies, nor.

This position changed from the mid-1980s onwards. The EC began to pass legislation regulating supply (cf. Schmidt 1997, Thatcher 2001, Hart 2000).⁶ Initially (the late 1980s), it focussed on certain parts of telecommunications, notably advanced services and terminal equipment. However, during the 1990s it extended its reach to the entire telecommunications sector. Moreover, it began to pass legislation for parts of the energy sector, namely large users in electricity and gas, some of the postal sector, and the railways. Finally, during the late 1990s and then after 2000, it passed increasing amounts of legislation, notably for the remaining parts of electricity and gas, and the railways.

The central feature of EC sectoral legislation was ‘fair and effective competition’. Member states were obliged to end national monopolies (‘special and exclusive rights’) over supply. They were not permitted to prevent entry to liberalised market segments (with a few exceptions due to capacity shortage- eg mobile communications). Tariffs were to be based on costs. Regulation was to be organisationally separated from supply- ie different organisations were to undertake these functions. When competition seemed impossible, EC law required separation, at least in accounting terms, between the infrastructure and supply of services on it (eg in railways). General EC law on public procurement was extended to network industries, who now had to follow rules such as publication of tenders and non-discrimination in equipment purchasing. EC law did not require the creation of independent sectoral regulatory authorities, but the EC Commission strongly promoted them.

⁵ The paper refers to the European Community throughout as decisions were taken under the EC pillar of the EU

⁶ Key liberalising directives include: Commission 1988, 1990, 1994, 1995, 1996, ; European Parliament and Council 1996, 2003a for electricity; European Parliament and Council 1997 for postal services; European Parliament and Council 1998, 2003b for gas.

The EC Commission also increasingly applied general competition law to network industries, including publicly-owned suppliers. The most visible examples were in the airline industry, where it attacked subsidies as illegal state aid. In addition, although under the Treaty of Rome the EC cannot alter ownership in member states (Article 119[222]), the Commission greatly ‘encouraged’ privatisation of suppliers, notably through in negotiations on state aid.

Although the ‘public service’ aspects of network services were recognised, they were severely circumscribed. First, the Commission and EC legislation argued that they were exceptions to the general rule of competition that had to be costed and justified. Thus for example, the provision of ‘universal service’ was accepted, but national policy makers had to show additional costs in a transparent manner. Second, public service tasks were limited- for instance, universal service referred to the provision of basic services; other tasks such as long-term industrial policy goals were not accepted. Finally, public service tasks were not to be used to promote specific suppliers- on the contrary, they were to be implemented in a transparent and non-discriminatory manner. The bulk of EC sectoral legislation remains based on liberalisation and regulation to ensure that competition is fair.

Three major points are worth underlining in analysing EC regulation. First, the EC’s framework ran strongly counter to both industry and state-led models of coordination as had operated in West Germany and France during the 1970s and 1980s. However, it was very much aligned with the ‘regulated competition’ model in Britain. It outlawed or threatened key elements such as legal monopolies, cross-subsidies between services, favoured equipment suppliers or state aid to national champions.

Second, despite the apparent conflict between national regulatory models in France and Germany and EC law, the two countries largely supported the development of EC regulation. The extent of Commission ‘imposition’ on member states (supported by the European Court of Justice) as against national acceptance is debated in telecommunications (see Sandholtz 1998, Schmidt 1996, Thatcher 2001). However, most directives were passed by the Council of Ministers. They involved long negotiations but were accepted by governments after significant compromises over the timing of liberalisation rather than the principles of competition and EC-level regulation.

Third, EC regulation altered the potential dynamic of European markets. If implemented in practice, it offered the possibility that national champion suppliers could expand into other markets, taking advantage of liberalisation and EC rules for ‘fair and effective competition’. By the same token, it threatened the domestic monopolies of those national champions. Thus the new ‘single market’ offered opportunities for cross-border expansion but also dangers of new domestic or overseas competitors entering home markets.

IV National responses to EC regulation⁷

⁷ For cross-sectoral and cross-national comparative studies that discuss network industry reform, see Henry 1997, Coen and Thatcher 2000, Henry, Matheu and Jeunemaitre 2001

Britain

During the late 1980s and 1990s, Britain largely continued its path of liberalisation and privatisation.⁸ Thus for instance, it sold off remaining shares in BT, energy suppliers (including nuclear power) and then broke up and sold British Rail. By 2005 the only major network in public hands was the Post Office. Competition was extended into the residential market for gas and electricity in the 1990s and then into postal services. Liberalisation was accompanied by much greater detailed formal rules- over retail prices, terms of interconnection between networks, use of infrastructures, information, quality of service, trading arrangements for energy and internal pricing within integrated suppliers to name but a few. Further independent regulatory agencies were set up, notably in the railways and postal services. Relations between suppliers and the government saw increasing separation. Governments were rarely directly involved in ‘commercial decisions’ of companies. Nor did they protect British firms from overseas takeovers- indeed, the 1990s saw a string of acquisitions and mergers, notably by US and French companies. Yet this did not mean disengagement by the state: on the contrary, the independent regulators, especially the sectoral ones, created many detailed rules for incumbent suppliers. Relations between regulators and incumbents were initially often conflictual but over time, the key policy norms centred on ensuring ‘fair and effective competition’ became widely accepted (cf. Coen 2005a).

Thus by 2000, Britain had moved very clearly towards regulated competitive market institutions for network industries. The period after c2000 saw some interesting and perhaps unexpected shifts in regulation, especially concerning the formal framework and role of the government. The latter intervened to deal with failing infrastructure suppliers. In electricity, it rescued the privatised nuclear electricity generator (British Nuclear). In the railways, it forced the railway infrastructure provider Railtrack into liquidation and replaced it with a not-for-profit company (Network Rail) guaranteed by the state- a backdoor form of nationalisation. Moreover, it greatly increased public subsidies for railway investment and is currently engaged in restructuring the rail regulators to increase its direct role. Nevertheless, the dominant model has remained that of institutions based on private ownership, competition and regulation.

EC regulation played almost no visible part in developments in Britain during the 1990s or after 2000. Britain had little adjustment to make to incorporate EC regulation: it had liberalised and privatised before EC action took place and its new reforms were compatible with the EC’s regulatory framework. Policy makers justified their regulatory framework based on private ownership and competition in terms of economic principles and protecting the ‘consumer interest’ through choice. Insofar as they looked elsewhere, it was to the US rather than the EC.

However, at the EC level, in network regulation, Britain was far from being an ‘awkward partner’ - on the contrary, it was a strong supporter of EC and Commission regulation to liberalise markets and expand EC competencies. Thus it led ‘liberal’ member states which favoured the use by the Commission of Article 86[90] to issue directives ending monopolies in telecommunications (Thatcher 2001). It also enthusiastically backed the Commission in expanding its activity into electricity, gas,

⁸ For analyses and overviews of reform of British network institutions, see Foster 1992, Newbury 1999.

railways and postal services (cf. Geradin 2000, 2001a,b). British governments and regulators devoted their energy to seeking to export the UK model of regulation and arguing that liberalisation in continental Europe was too slow. They saw liberalisation in continental Europe as offering opportunities for UK-based companies and more generally, that the EC was following the British lead in regulatory reform.

*France*⁹

French policy makers might have been expected to oppose EC regulation, since it ran counter to traditional state-led model of regulatory institutions, notably state financial support, cross-subsidies between services, monopolies over infrastructures and privileged relationships between national champion infrastructure and equipment manufacturing suppliers. At the level of rhetoric, France opposed ‘liberalism imposed by Brussels’. Yet the reality was much more complex. French governments, in conjunction with national champion suppliers, accepted the principle of ending national monopolies- notably in telecommunications, energy and postal services. However, they fought the Commission and ‘liberal’ member states such as Britain over other matters. One was timing, as France sought to delay liberalisation; thus for example, in discussions in 1993/4 in telecommunications, it sought to push back full competition in the infrastructure. Another was re-regulation: French governments sought to balance increased competition with EC measures to allow member states to protect objectives such as ‘universal service’ or rural development. The third was the constitutional position of liberalisation directives: France bitterly resisted the use of Article 86(3) (ex-Article 90) which permits the Commission to issue its own directives to enforce competition rules over public enterprises or enterprises to which member states have granted ‘special and exclusive rights’ (for instance, monopolies) (Schmidt 1998). It lost this legal battle in telecommunications, but the Commission did not use Article 86(3) for liberalisation directives in other domains such as energy or postal services. France’s stand was linked to a fourth element in its approach to EC regulation: negotiations with the Commission to obtain quid pro quos for its acceptance of EC liberalisation. Thus for instance, it accepted liberalisation of telecommunications in the mid-1990s in return for the Commission approving an alliance between France Télécom and Deutsche Telekom (Thatcher 2001). Finally, despite French government rhetoric opposed to EC liberalisation, French suppliers have turned to Brussels when faced with overseas obstacles to expansion.¹⁰

While France was accepting or negotiating change at the EC level, at home formal institutional frameworks were considerably modified from the 1990s onwards. The organisational status of state network suppliers was altered towards private law companies (for instance, France Télécom in 1990 and then EdF and GdF 2004/5; in railways, services were separated from infrastructure in 1997). Partial privatisations (coily termed ‘openings of capital’) followed for some suppliers (eg France Télécom and Air France, which by 2005 are majority privately owned; partial privatisation is planned for EdF and GdF). Legal monopolies were ended, although France has usually gone no further than required by EC law. As competition has been permitted,

⁹ For cross-sectoral studies, see Bauby 1997, Henry 1997

¹⁰ One prominent example was Italian electricity, where the government passed a law to prevent EdF from using its purchase of a controlling stake in a large domestic supplier, Montedison, leading to legal action before the European Court of Justice.

detailed regulatory rules have also developed. New independent sectoral regulators were established for telecommunications and energy, and currently, postal services.

Thus France altered several of the formal regulatory institutions that underpinned its state-led coordination approach, notably state monopolies, publicly-owned suppliers with a special public law status and regulatory powers lying in the hands of the government. It moved partially towards the formal institutions of a regulated competitive model of regulation. Why was this done?

In part, institutional change arose from factors unrelated to European regulation of network industries (cf. Quélin 1994, Bauby 1997, Thatcher 1999, Rouban 1997). The grand project strategy came under attack in the 1980s and 1990s (for example, in electronic services or nuclear energy). France faced fiscal deficits that made privatisation very attractive to governments and limited the state's capacity to fund largescale investment. In some sectors, notably telecommunications, policy makers saw international markets altering to make competition and internationalisation of suppliers as inevitable and hence sought to prepare French suppliers.

Nevertheless, the reforms were far from defensive. A modified French strategy of creating European or international champions emerged (cf Cohen 1995). This had two related strands. First, French suppliers such as EdF, France Télécom, GdF, Air France and even SNCF expanded abroad- by exporting directly, taking over foreign companies or creating alliances with overseas suppliers. Thus in telecommunications, France Télécom formed an alliance with Deutsche Telekom and the US firm Sprint in the 1990s, took over the mobile telephone company Orange in 1999 and bought shares in Italian consortia. In electricity, EdF became the most expansionary supplier in Europe, supplying electricity to Italy, Spain and Britain, buying stakes in overseas operators in several countries including Britain, Italy and Spain. In the 1990s Air France formed an international Skyteam alliance to compete internationally.

Overseas expansion was closely related to a second strand: ensuring that French suppliers had a solid domestic base for overseas operations. The organisational position of operators such as EdF, GdF or France Télécom was altered, so that they could issue shares and were permitted to take over foreign companies; hence one of the reasons for privatisation was to provide capital and also to allow suppliers' shares to be used for overseas purchases. Policy makers also sought to ensure that the domestic market is profitable and hence produces cash to finance overseas 'adventures'; thus for example, France Télécom has gradually been able to pay off some its huge debts incurred in the purchase of Orange through profits on its French networks, while Air France has been able to take over domestic competitors such as Delta or Air Inter to enjoy an effective monopoly over the domestic market. Technological advances and large markets in France have offered a protected base for overseas supply. In particular, EdF has exported excess nuclear energy to neighbours, helped by the low variable costs of generation (and not bearing the full fixed costs of power stations). Similarly, Air France's position is aided by high quality infrastructure for the Paris Charles de Gaulle airport, which offers a good hub for its operations. A further element has been protection of the home market from overseas competition. This has seen a range of measures, from use of re-regulatory instrument such as licensing or universal service obligations to re-balancing of tariffs by suppliers to reduce profitable opportunities for newcomers.

European integration has been central to the French strategy of creating international champions (cf. Cohen 1996). First, EC liberalisation measures open up national markets for expansionist companies such as EdF. They provide tools to attack overseas monopolies and attempts to restrict French suppliers, who have often been larger and better capitalised than other European suppliers, notably in Italy, Spain and Germany. Second, European regulation has offered a valuable tool to legitimate controversial changes such as privatisation or altering the organisational status of suppliers. Reformers have been able to argue that they have little choice but to alter institutional arrangements- otherwise national suppliers would be disadvantaged in the new competitive European market ‘imposed by Brussels’ (cf. Rouban 1997, Henry 1997, Commissariat du Plan 2000, Thatcher 2004). These have been useful arguments for breaking down the previous political coalition that supported public ownership and monopolies, and instead creating a new one composed of governments, the top management of suppliers and the ‘nationalistic right’ (and sometimes also the nationalistic left), leaving trade unions and employees often isolated with only the extreme left as allies. Third, the gradual nature of European integration has aided France’s strategy. Liberalisation has been clearly signalled, allowing French suppliers time to prepare. Moreover, transposition of EC liberalisation measures has often been late in France (for example, for electricity or postal services) helping to delay overseas entrants to the French market.

EC regulation has aided both strands of the French strategy. It has permitted the continuation of informal institutions of coordination between governments and suppliers. Strong links between the two through have remained, buttressed by social and political networks and the use of government appointment powers. The heads of network suppliers have enjoyed very close relationships with elected politicians and senior civil servants, aided by all three groups being largely drawn from the grand corps.¹¹ European integration has not prevented those strong relationships from being used to advantage French international champions. The French government has strongly supported suppliers abroad and participated in crafting deals that aided overseas expansion. Thus for instance, it offered the EC Commission accelerated liberalisation of telecommunications infrastructure in return for approval of France Télécom’s alliance with Deutsche Telekom and then Sprint. In electricity, it put strong pressure on the Italian government to abrogate the law designed to prevent EdF controlling an important domestic electricity supplier (Montedison) and ultimately promised that by selling a share of an EdF company, the Italian supplier ENEL would gain a set share of the French electricity market! Equally, re-regulatory instruments have been open to use (and abuse) to protect the French market. Third generation mobile licensing provides an excellent example. EC law insist that licensing methods must be non-discriminatory but allow member states the choice between allocating through auctions or beauty contests, and also are silent on the cost of licences. France ran a high cost ‘beauty contest’, which first led most overseas bidders to seek a French partner and then withdraw when the costs were too high; finally, three French bidders emerged, and the French government greatly reduced the costs of the licences for them. Provisions over universal service have been available to ensure that payments can be made to La Poste or France Télécom. Favourable accounting

¹¹ The most prominent examples include Thierry Breton (head of France Télécom 2004-5 before becoming Finance Minister) or Bernard Attali (brother of Jacques Attali, Mitterrand’s close advisor), who was head of Air France in the 1990s.

practices, such as the allocation of the costs of nuclear power between the government and EdF, or the transfer of SNCF's debts to the infrastructure supplier Réseau Ferré de France (RFF)s have offered another means of ensuring financial support. Although independent regulators have sought to extend competition, they have found themselves hampered by lack of political support; hence for example, in 2005, attempts by the ART to question France Télécom's increase in rental charge were swiftly overcome by an alliance between the Prime Minister and the supplier. Even naked state bailouts of suppliers (for example, to Air France or France Télécom [in] have not been stopped by the EC Commission), which at best has undertaken lengthy investigations or sought assurances that state suppliers would undertake 'restructuring' to justify the state aid.

The result is that while France has moved a significant distance from the formal institutions of a state-led model of regulatory institutions towards a regulated competition model, it has been able to adopt a modified state-led policy of promoting national champion firms abroad and at home through use of re-regulatory instruments and informal networks.

*Germany*¹²

At the EC level, Germany was often initially reluctant about EC liberalisation measures during the late 1980s (cf Eising and Rainer 2000, Schmidt 1997) However, its position altered, so that by the early 1990s, it not only accepted EC legislation to extent competition but was frequently an ally for Britain at the EC level. Germany supported EC regulation that ran directly counter to many German traditional institutional arrangements- for instance, monopolies or the role of industry associations in setting standards and dividing up markets.

At the same time as EC regulation was being developed, major reforms were introduced in Germany from the 1990s onwards. These were often made gradually and after lengthy debates that often involved government and opposition political parties and trade unions. The incremental and consensual nature of reform was particularly strong when constitutional reform was required (for instance, to privatise Deutsche Telekom). The organisational position of suppliers was changed. Some major publicly-owned network suppliers were privatised. The most striking example was Deutsche Telekom, which was made into a form of public corporation in 1995, 25% privatised in 1996 and by 2001 was majority privately owned. Other suppliers were moved towards market organisation as forms of private law companies, albeit entirely state owned; thus for instance, the railway operator, the Deutschebahn, was made into a private law company and then in 1993 infrastructure and service provisions were separated (Lodge 2002). Competition was gradually extended by law into different sectors- from telecommunications to energy (Bollhoff 2005; Heritier 2005; Coen and Héritier 2005; Eberlein 2000). The general competition authority has extended its role to include reviewing industry association agreements. Although independent regulatory agencies run counter to German administrative traditions, several sectoral regulators were created.¹³

¹² For cross-sectoral studies see Coen and Héritier 2005

¹³ For example, the RegTP for telecommunications and postal services (1996) and the Bundesaufsichtsamt für den Wertpapierhandel- BAWe for stock exchanges in 1995 (Döhler 2002,

The result of the reforms is that Germany's formal regulatory institutions have moved a long way from the traditional ones. The previous closed regulatory structure in which industry associations had many powers and faced relatively few other actors or legal constraints has been ended. Instead, the associations must deal with sectoral and general competition authorities, and new entrants, as well as the government and incumbent operators. However, change have been made over a considerable period of time

How can Germany's reform strategy be analysed in the context of European integration? Why were major reforms introduced into formal institutions after years of little change? Why did Germany accept EC regulation that largely ran counter to traditional institutional arrangements?

On the one hand, German policy makers faced powerful forces for change that were largely unrelated to EC regulation. The most important was the effect of reunification, which left many German network suppliers with enormous debts and large modernisation programmes. Thus for instance, after West and East Germany's telecommunications operators had been merged, Telekom faced debts of DM100 billion, and debt servicing costs represented 12% of its income of DM 54 billion in 1992, and an estimated DM60billion was required between 1990 and 1997 (The Economist 30.10.93; Werle 1999). Moreover, reunification left the federal government short of money, and hence less able to finance network development and instead looking for new sources of revenue, notably from privatisation. Another significant factor was the influence of overseas examples, particularly the UK: German policy makers were attracted by the UK regulatory model, including competition and independent regulatory authorities (cf. Eising and Jabko 2000; cf Lodge 2002). Domestic dissatisfaction also played some role, notably from business users in telecommunications and electricity, who attacked high prices for large users, poor service and cross-subsidies. REFS A final factor, notably in for energy and telecommunications, was fear of loss of competitiveness for Germany, especially in the context of slow growth and high unemployment in the 1990s and 2000s.

On the other hand, European regulation played several important roles in reform. It offered an additional source of pressures for change. The Commission exerted direct pressures on German policy makers to modify regulatory institutions, through court cases based on general competition law for liberalisation, the ending of association agreement and against 'state aid' to more subtle encouragement to create independent regulatory authorities, especially in energy. Overseas companies from other European nations began to enter the German market- either directly as suppliers or through alliances and takeovers. The most spectacular example was the hostile takeover of Mannesmann by the UK based firm Vodafone in 19XX, which ran counter to German traditions of consensual mergers. German policy makers worried that large overseas companies such as BT or EdF with considerable capital and experience would overwhelm domestic firms. They were particularly concerned about energy, where German firms were small and fragmented, lacking a powerful 'national champion'

Böllhoff 2002, 2005); in energy, Germany is currently (2005) establishing a sectoral regulator attached to the RegTP.

company. Without reform, EC regulation left German suppliers open to being swallowed by larger predatory companies.

However, European integration was not just a source of pressures: it also offered opportunities for domestic actors. First, EC liberalisation aided some German firms to expand abroad. Thus for instance, Deutsche Telekom formed an international alliance with France Télécom and then the US firm Sprint in the mid-1990s, which was approved by the Commission in exchange for agreement on rapid liberalisation of the telecommunications market (Thatcher 2001). Equally, in postal services, Deutsche Post sought to expand in other countries thanks to the introduction of competition. Second, the 'demands' of European integration allowed larger domestic firms to seek changes to improve their position within Germany. Thus for instance, in energy, larger suppliers sought to break down the protection given to municipal suppliers and hence expand their domestic market share (Eising and Jabko 2000). Equally, large users saw that competition could lower prices and increase their choice of suppliers. However, a third reason was perhaps the most important: EC regulation represented an important external source of legitimation for reforms that were designed to allow German network suppliers to adapt to EC and non-EC pressures. It was argued to make reforms urgent and indispensable, aiding governments and network managers to overcome opposition, especially by trade unions and employees. Thus for instance, it was used to justify controversial reforms such as privatisation of Deutsche Telekom (Thatcher 2004) or transforming DeutscheBahn into a private law company. These reforms were desired for many non-European reasons, including raising finance for the German budget and adapting German suppliers to 'inevitable' changes in an altered world market, such as increased competition and the spread of internationalised companies (for telecommunications, see Schneider 2001). After years of blockage, the EC provided an important 'external' source of impetus and justification for change.

Yet change in formal regulatory institutions also left much scope for the continuation of traditional informal institutions. Although the role of industry associations has been weakened by the arrival of new entrants and competition, they remain significant in energy and railways (Coen 2005; Héritier 2005). Thus for example, they continue to strongly influence third party access to the energy infrastructure, a key element in competition (Coen 2005; Böllhoff 2005). Equally, although independent sectoral regulators have been created, their autonomy in practice has often been limited. Hence for example, the RegTP for telecommunications and postal services has appeared to be strongly 'shadowed' by the federal government, helped by the fact that most of its employees are former ministry officials (Coen and Héritier 2005). In energy and railways, pro-competitive regulation by lack of an independent sectoral authority and the lack of resources of the general competition authority (five- eight staff assigned to the energy sector and one for railways- Coen 2005b; Héritier 2005).

Thus whilst German formal regulatory institutions moved towards those of a 'regulated competitive market', they did so gradually and leaving in place many informal institutions of a industry-led model of coordination. European integration played an important part in the evolution, acting as a source of pressure but perhaps more importantly, as part of a strategy of adaptation for network suppliers and the state to a new domestic, European and international environment that was much less favourable to traditional institutions.

V Conclusion

Regulatory institutions- formal and informal- provide a means to coordinate suppliers with other actors. In network industries, coordination between suppliers and governments is particularly important given the political and economic characteristics of these industries. However, different combinations of regulatory institutions are possible, allowing for sectoral equivalents to varieties of macro-level capitalist institutions.

After a relatively similar starting point of industry-led regulatory institutions in the mid-1960s, Britain, France and West Germany introduced different institutional reforms at the sectoral level to deal with pressures on network supply in the period until the mid-1980s. Moreover those reforms increasingly matched those expected at the macro or national level by the literature on varieties or models of capitalism. Britain had greatly enhanced the role of competition and private markets to coordinate the different actors, as expected in a 'liberal market economy' (cf. Hall and Soskice 2002). France had taken the opposite direction, reinforcing the direct role of the state (cf. Schmidt 1996, 2002, Hancké 2001). West Germany had largely retained the industry model of coordination, remaining closest to the traditional European model, due to the importance of consensus and the lack of a strong central group of policy makers to take the lead in creating new projects. For each country, the influence of institutional complementarities can be seen, as policy makers drew on existing institutional constraints and resources in choosing their differing national paths.

From the late 1980s onwards, the EC developed a wide-ranging regulatory framework that conflicted with, and often outlawed, regulatory institutions in France and Germany, such as monopolies, cross-subsidies or closed privileged relationships between network infrastructure suppliers and equipment manufacturers. Perhaps surprisingly, national governments largely accepted the EC's regulatory framework. The period also saw major reforms that considerably reversed the increasingly diversity among Britain, France and Germany. All three countries moved towards regulated competition model of formal institutional structures, with the privatisation of suppliers, the ending of monopolies and the creation of independent sectoral regulatory authorities took place. The speeds and extents varied of the movement varied- as predicted by a 'varieties of capitalism model', Britain moved furthest and fastest. Nevertheless, the changes represent considerable convergence compared with the position in the mid-1980s.

Despite convergence in formal regulatory institutions, three sets of important differences have existed between Britain, France and Germany. First, the role of EC regulation in domestic institutional reform has varied. In Britain, it was negligible as reforms often preceded EC regulation and in any case were undertaken with little reference to Europe. In contrast, in France and Germany, European regulation played an important part in creating additional pressures for change, in offering advantages for firms and large users and in legitimating reform in the face of opposition. Thus the nature of 'Europeanisation' varied.

A second and related contrast concerns the strategies of policy makers in the three nations concerning both institutional reform and the EC. In Britain, policy makers sought the extension of competition and accepted foreign entry, including entry by overseas buyers of British companies, with little regard to Europe. In contrast, French policy makers aimed at creating strong French international champions that would expand abroad, aided by a good domestic base. EC regulation was crucial for their approach, since it ensured other markets would be opened to French suppliers. Germany policy makers faced great domestic pressures, and hence used EC regulation to adapt to problems such as fiscal constraints, inefficiencies of networks and sometimes fragmentation of suppliers. EC regulation formed part of a more defensive adaptation strategy than in France.

Finally, despite a common EC regulatory framework, informal regulatory institutions continued to differ greatly across the three nations- both informal norms and linkages between governments and suppliers. In Britain, norms of seeking 'fair and effective competition' and non-interference by governments in the internal decisions of suppliers went hand in hand with considerable distance between most suppliers and government. In contrast, policy makers in France sought to promote French suppliers abroad and protect them at home, a policy aided by close links between elected politicians, civil servants and the heads of suppliers. In Germany, there were norms of adaptation to a new environment and gradual change, whilst industry associations continued to play a significant role.

The overall outcome thus is convergence in formal regulatory institutions, but with continuing differences in the mechanisms of reform, national strategies and informal institutions. Two final questions can be raised. First, whether it will be possible to maintain formal institutions and informal ones that are in dissonance- notably in France. Second, will the EC's regulatory framework continue to be sufficiently flexible to allow contrasting informal institutions to continue, or will diverse uses of formal regulatory instruments lead to increasing pressure for greater EC regulation to create fairness across member states?

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