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Political and Societal Veto Players in Regulatory Reform: The Transformation of Telecommunications in OECD Countries

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Abstract

The past two decades have witnessed a significant realignment of the roles of the state and the private sector in infrastructure industries. Using telecommunications as an example, the study takes advantage of this "natural experiment" to review the explanatory power of the veto player model both theoretically and empirically. At a theoretical level, we point out that one of the great advantages of the veto player model, its parsimony, is at the same time its weakness. This conclusion is solidified by our empirical results. In contrast to earlier work that uses the number of significant laws as the dependent variable, the paper develops a multi-dimensional measure of the legal and institutional transformation. We find that the simple veto player model does not explain the empirical pattern of reforms. An augmented model that differentiates between collective and competitive veto players has much higher explanatory power. Moreover, we find that the structural configuration of the interest group system helps explain the dynamics as well as the extent of sector transformation.

Introduction

Just a few years into the new millennium, it may seem speculative and premature to label the last two decades of the 20th century as a "new great transformation". However, there is no doubt that the previously stable balance between the market and the state, which had emerged after the end of the Second World War, began to change in a particularly drastic way in this phase of history. With the collapse of the Eastern Block at the end of the 1980's and the ensuing waves of privatization and liberalization, markets could expand in territorial terms. Before reaching its preliminary climax in the 1990's, the revolution in information technology had spread to all areas of society and was ultimately an important factor in the functional expansion of markets. Many of the previously state-controlled infrastructure sectors were opened for private actors, transformed into private forms of organization or even materially, i.e. completely privatized. As for public infrastructures, this pertained to telecommunications in particular. In almost all industrial states, in which telecommunications systems were organized as state-controlled or at least state-regulated monopolies, we have witnessed a new transformation towards private markets since the 1980's.

If we were to conceptualize this transformation as a transitional path in an institutional "state space" (Bunge 1996: 391-2), considerable differences would emerge in terms of "trajectories of privatization" in the advanced industrial countries. Different countries have experienced gradual or rapid, moderate or radical transformations. The objective of this paper is to explain the cross-national variation in these paths of transformation on the basis of political factors. In other analyses (Schneider, Fink and Tenbücken 2004; Fink and Schneider 2004) we have shown that differences in the ideological orientation of governments have played an important role at least in the 1980's. However, the explanatory power of this variable decreased rapidly in the 1990's, when governments of every hue jumped onto the bandwagon of international privatization. At the same time, our investigation has shown that there is no observable correlation between the degree of integration of a country into the global market (measured by the openness of a national economy) and the course of privatization. Only the liberalization of financial markets has a significant effect on the course of privatization. Another surprising result was that political institutional factors also did not appear to possess any explanatory power for the varying paths of privatization. This paper thus strives to examine this relationship, which diametrically contradicts current prominent institutionalist theory in political science, using the example of telecommunications. In doing so, we will analyze the institutional factors in more differentiated terms and fall back on diverse variations of the veto-player approach.

In the following section we first discuss the most prominent veto player approach formulated by Tsebelis (2002), claiming to explain "how political institutions works", according to the subtitle of this book. Based on a critique of Tsebelis' empirical implementation his basic idée, we will extend this approach to further types of players and institutional restrictions. In a subsequent step we will deal with the selection of the units of analysis, the collection of data and the construction of the dependent variable "the depth of the transformation" in telecommunications. In a further step, we will discuss measurement problems and strategies based on the concepts discussed in the theoretical section. The explanatory power of these variables for the transformation of the telecommunications sectors will consequently be compared using various statistical techniques of analysis. To analyze the dynamics of the transformation process, we apply a combination of event data and OLS regression analyses. The latter technique is also applied to analyze the timing and extent of the transformation. Finally, we offer an overall interpretation of the results, enabling us to draw conclusions and offer impulses for future research.

Institutional Arrangements, Policy Choice, and Policy Transformation

Public policies are enabled and constrained by the specific institutional endowment of a country (Levy and Spiller 1996). This institutional endowment evolves with and is embedded in a specific sociocultural and historical environment. The pertinent literature uses the term "institution" in three different ways, referring to (a) the rules of the game (North 1990); (b) organizations (Nelson 1994); or equilibrium expectations resulting from repeated interaction among the players of a game (Aoki 2001). North's approach is intuitively compelling whereas Aoki's formulation is theoretically more versatile. "Rule-of-the-game" theorists typically subscribe to the view that institutions are designed (although they do not offer detailed explanations as to how binding institutions emerge). Equilibrium theorists view institutions as emerging from repeated interactions among players in a society. In this view, institutions coordinate behavior because they are a "self-sustaining system of shared beliefs," whose content is a "summary representation (compressed information) of an equilibrium of the game" (Aoki 2001: 10). In practice, however, institutions are both emergent from repeated interaction and designed in political processes (Samuels 2002).

Each society can be described by a unique "stock" of formal and informal institutions. Formal institutions include the legal system (e.g., constitutional, statutory and case law) and the political set-up of a polity (e.g., the division of powers). Informal institutions include values, beliefs, customs and norms shared by the members of a society. Except in periods of rapid transition or revolution, institutions evolve gradually and can be changed by expending time and effort (Brock 1994). To this end, institutional frameworks specify meta-rules that govern the process of formal institutional change (e.g., rules for amending the constitution). Therefore, at every given point in time the institutional endowment of a society reflects earlier periods, creating forms of path dependence. Telecommunications legislation and regulation, which is the focus of this paper, is embedded into this broader framework. It needs to obey the constraints imposed by political institutions, such as due process, the division of labor between federal and state jurisdiction or the role of courts exercising their power of judicial review. As a result, not all theoretically possible policy options are also feasible. In the short run, this framework can be considered an exogenous set of conditions; however, in the long run it is endogenous to the overall system.

Hammond and Butler (2003: 146) distinguish six literatures that study the effect of institutions on policy choices and outcomes. One of the most influential models, rooted in the tradition of rational choice models and game theory, is George Tsebelis' (1995, 2002) veto player approach. The basic argument is straightforward: a policy status quo can only be changed if a certain number of individual or collective players agree to the proposed change. Absent such agreement, policy will remain stable at the status quo. The number of relevant veto players is partly related to the political institutions of a country or region. Tsebelis (2002: 2) differentiates institutional veto players, determined by the constitution of a country, and partisan veto players, which are based on governing coalitions of a country's political system. Not all the institutional or partisan players are necessarily veto players. It is possible that other players "absorb" some of them, if they occupy the same preference positions or control each other. It is therefore important to identify the relevant veto players only and to eliminate absorbed players. Earlier theories classified countries according to political regimes (e.g., parlia-

mentary, presidential) or political system (single party, multi party). The veto player approach does not assert that these aspects of political institutions are irrelevant. However, it claims that for a broad range of political phenomena the number of veto players is a more critical aspect of the political system and allows the generation of theories with improved explanatory power.

In Tsebelis' model, each veto player has a preferred position and preferences over other policy choices. Positions further away from the preferred position are less desirable. Thus, the preferences can be mapped as concentric circles around the veto player's preferred position. These are relatively easy to determine in the case of individual veto players. In the case of collective veto players, complicating issues arise. For example, depending on the majority requirements (simple, qualified) the preference order of a collective veto player may or may not be transitive. Tsebelis (2002: chapter 2) develops approximations that allow representation of collective veto players as individual veto players with minimal loss of generality. The policy status quo (SQ) is obviously a feasible policy outcome. Given the preferences of veto players, applying the Pareto principle, the status quo can only be changed if there are policy choices that make at least one of the players better off without making any other player worse off. The set of all policies that can defeat the status quo is called the *winset of the status quo* W(SQ).

If the status quo is within the polygon connecting the preferred points of the veto players, it can not be defeated by any other policy. This set is called the *core* and can also be described as the set of all policies whose winset is empty. A correspondence exists between the size of the winset and the size of the core: the larger the winset of the status quo, the smaller, in general, the core and vice versa. Policy will be stable if the status quo is in the core of if the winset of the status quo is small. The presence of transaction costs will generally increase policy stability. Policy stability has important consequences: it reduces the importance of agenda setting, increases government instability in a parliamentary regime, increases regime instability in a presidential regime, and contributes to a higher degree of independence of the bureaucracy and the judiciary (Tsebelis 2002).

Tsebelis (2002) derives some important features of the veto player model. These hold strictly in the case of individual veto players and as approximations for collective veto players. The following key implications hold:

- The addition of new veto players increases policy stability or leaves it unaffected (Tsebelis 2002: 25)
- If a new veto player is added whose preferred position is within the core of the previous veto players, it has no impact on policy stability (Tsebelis 2002: 28)
- For comparable positions of the status quo, a system in which the preferred positions of veto players are further apart will exhibit higher policy stability (Tsebelis 2002: 30)
- If moves are sequential, the veto player that can set the agenda can select her most preferred position given the winset of the others (Tsebelis 2002: 34).

Whereas these propositions clarify the effect of the number of veto players and their distance on policy stability, they only constrain but do not fully determine the policy position that defeats the status quo. From a small winset of the status quo follows that the distance Δ between the status quo ante (SQ) and a new policy choice (SQ') will be small also. However, if the winset of the status quo is large, policy change may but need not be large. In other words, the size of the winset (or, by correspondence, the core) is only a necessary but not a sufficient condition for the extent of policy change. In a comparison of multiple cases, one would expect to observe a higher mean distance between policies *and* a higher variance of the distance in cases with a large winset of the status quo. In situations with a small winset, one would expect a small mean distance as well as a small variance (Tsebelis 2002: 32). Conventional statistical methods, such as regression analysis, assume that independent variables are necessary conditions for the dependent variable. Therefore, the veto player model would require alternative methods, such as the diversity analysis proposed by Ragin (2000) or at least supplementation of regression analysis with additional tools as practiced by Tsebelis (1999, 2002).

Elegance and analytical coherence are impressive features of the veto player model. By focusing on the decision-making requirements of policy changes, the model allows a better understanding of policy outcomes. As the model integrates the preferences of veto players with the institutional structure of decision-making, it potentially overcomes the quandary raised by Hammond and Butler (2003): that the effects of political institutions are mediated by the pref-

erences of the decision-makers. However, the model also has certain shortcomings, several of which were discussed elsewhere (e.g. Ganghof 2003). These arguments should not be seen as an alternative to but rather as an improvement of the veto player model. For the purposes of our inquiry it is most important that the model does not pay sufficient attention to other conditions of policy choices and change.

First, the model does not explore how the preferences of the veto players are formed. Most policy decisions take place under conditions of incomplete information and uncertainty. The nature of a policy problem, the range of possible solutions, and the choice of a specific solution are all dependent on shared mental models of the problem at hand (Denzau and North 1994). Institutional arrangements other than those reflected in veto players may strongly contribute to the process of defining such a shared vision. For example, the organization of business and other major interest groups will likely influence these processes. This may affect the distance between formal veto players and would then be reflected in the size of the winset. It could also directly affect the size and shape of the winset. Thus it is possible that policy interaction not related to the formal veto players expands or reduces the size of the winset. Lastly, it could lead to long periods of policy stability, during which alternative policies are negotiated, followed by significant transformation measures.[1]

Second, the model does not directly reflect the extent of "problem pressure," that is the perceived need to change the status quo. Tsebelis (2002: 31) is aware of this problem but does not offer a solution. The veto player model could accommodate this issue by simply stating that in situations with high problem pressure the status quo is far away from the ideal positions of the veto players (and thus the winset is likely large). Another way to accommodate it is to argue that in a situation combining high problem pressure with policy stability, either government instability, regime instability or bureaucratic and/or judicial activity will result.

Lastly, the veto player model focuses on legislative action and not its substance. For this reason, Tsebelis (1999) uses the number of significant laws as the dependent variable. The veto player model would, for example, predict that an increase in the number of veto player would reduce the ability of government to pass significant laws. Thus, passage of fewer laws is seen as a form of policy stability as predicted by the model. A key problem with this dependent variable is that it would only yield an acceptable indicator of policy stability if the distance between the old and new status quo were approximately the same. In other words, this would hold if the number of laws were clearly related to the depth of transformation of a given policy. A country in which fewer laws were needed to effect a substantial transformation of a sector would then appear as examples of policy stability. On the other hand, a country with many laws of lesser impact would appear as one with less policy stability. Since different national legislative systems do have different styles and strategies of legislation (e.g. differences in using laws, regulations or decrees; differences in the comprehensiveness of legislation vs. incrementalism etc.), such a tight relationship between policy change and number of laws seems doubtful, even when only significant laws are taken into account.

In the following sections of this paper, we attempt to overcome these weaknesses in two principal ways. First, we specify the dependent variable as the depth of transformation of the telecommunication sector using a multi-dimensional index. Second, we estimate alternative models that allow us to test the relative explanatory power of the pure veto player model compared to an enhanced version of it.

Institutional Change in the Telecommunications Sectors of OECD-Countries

The focus of the following analysis is on the transformation of the telecommunications sector in 21 OECD states during the period from 1980 through 2000. The wave of transformation in this industry was triggered by the significant reform measures by the conservative governments in the United Kingdom, Japan and the United States at the beginning of the 1980's (see Grande 1994: 140-143, Levi-Faur 2003: 708).

[1] Tsebelis (1999: 603) indirectly recognizes this when he introduces a control variable for corporatism. However, his main motive is to reflect the fact that in labor law government may not be active unless coordination through peak associations fails.

The corporatization of the British telecommunications administration under the Thatcher government in 1981 serves as a specific starting point[2]. To pinpoint the status quo before the wave of reforms, the time period after 1980 will be researched. In 2000, Portugal was the last analyzed country to open its telecommunications market for competition (OECD 1999: 12). If we were to assume that organizational reforms and regulatory measures are aimed at securing a functioning state of competition after market liberalization and that they are thus implemented before or at least simultaneously with market liberalization, then the transformation process would have to be completed for the most part in all countries by 2000.

The selection of the examined countries comprises all economically advanced industrial nations, which held a democratic constitution for the entire time frame and have a population of more than three million[3]. Thus, the basic traits of the countries are held constant, which allows for a high degree of comparability. An additional pragmatic advantage of restricting the selection of countries is the availability of more comprehensive and complete secondary data to operationalize the different variables.

While the data for the independent variables were derived for the most part directly from data banks of the OECD and data sets published by political scientists on the Internet, the data for the dependent variable were gathered from various secondary sources, once again primarily from publications of the OECD[4]. To construct the variable "depth of the transformation" in an "institutional state space", data were collected on moves in the state space in four dimensions. These are (1) the transformation of the telecommunications administration in public or privately organized enterprises (*corporatization*), (2) the extent of material privatization (*privatization*), (3) the formal openness of the market for national long-distance calls (*national liberalization*), and (4) the formal openness of the market for international calls (*international liberalization*). All four items can assume the values "none" (= 0), "partial" (= 1) and "complete" (= 2). Details of the coding are presented in Table 1.

Table 1: Coding of the items for the dependent variable "Depth of Transformation"

Degree of transformation / *Item*	None= 0	Partial= 1	Complete = 2
Corporatization	Public administration	Mixed*	Corporation
Privatization	State property = 100%	100% > State property > 0%	State property = 0 %
National liberalization	Monopoly	Duopoly	Competition
International liberalization	Monopoly	Duopoly	Competition

Comments: *Amount of telecommunications providers still integrated into the state administration is larger than or equal to one

Of course, further items or dimensions are also conceivable. A measure of the liberalization of the market for local telephone calls would be a particularly desirable item. Moreover, a breakdown of the corporatization item into an indicator for the extent of transformation of the state telephone administration into public enterprises as well as the extent of transformation of public enterprises into privately organized enterprises would be desirable. Due to the lack of consistent information though, these items could not be coded for all countries and observed points in time. Nevertheless, the available indicators cover the essential facets of institutional reforms in telecommunications. Thus the liberalization items for national and international telephone calls refer to the dimension of market liberalization, while the corporatization and privatization indicators pertain to the dimension of state control of the dominant telecommunications providers[5].

It is evident here that the analytical focus of this study is limited exclusively to deregulatory or formal market-opening measures. The resulting "re-regulation" (Majone 1997: 143) to create and sustain functioning competition is not taken into considera-

[2] Although incremental institutional change in the telecommunications sector towards a liberalized and deregulated market already began in the 1950's in the USA, the dismantling of AT&T in 1984 is the first extensive reform step in this country (see Schneider 2001a: 188, 2001b: 74).

[3] These countries are Australia, Belgium, Denmark, Germany, Finland, France, Greece, Ireland, Italy, Japan, Canada, New Zealand, Netherlands, Norway, Austria, Portugal, Switzerland, Sweden, Spain, United Kingdom, United States.

[4] The data sources as well as possible changes in the original variables are documented in the data appendix.

[5] For partially deviant distinctions between the transformation dimensions, see Grande 1994: 141, Schneider 2001a: 88-97, 2001b: 71.

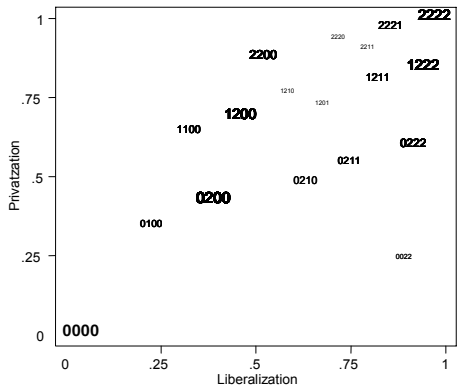
tion. As the linguistic distinction between deregulatory and re-regulatory or market-opening and market-sustaining measures already suggests, these are qualitatively different events that can hardly be illustrated as an individual dependent variable for a statistic analysis in meaningful fashion. For example, it is not apparent how institutional limitations of the government's room to maneuver influence independent regulatory authorities. The creation of such an institution is normally regarded as an extensive step towards the transformation of a telecommunications sector, which tends to be impeded by institutional limitations. On the other hand, one could argue that the state's loss of control over the dominating telecommunications provider is limited by the establishment of more or less independent regulatory agencies. If we thus use the dimension of state control as a basis, the change in the status quo is relatively minor in comparison to complete deregulation, and institutional behavioral limitations hence should only play a subordinate role.

To scale these transformations in the four-dimensional space, we employ the technique of "partial order scalogram analysis by base coordinates" (POSAC) (Shye 1994, Borg & Shye 1995: 107-126). POSAC can be regarded as a variant of multidimensional scaling to represent non-metrical data graphically and is also known as a non-metric factor analysis (Shye 1994: 4308). Every observation is represented by the profile of the values of the measured items, which also go by the name "structuples". One such structuple in our case consists of the four item scores for privatization, corporatization, national and international liberalization described above (e.g. "0122"). To pinpoint the position of the observations in spatial form, we focus on the ordered relationships that exist between the structuples of the observations. The relationship between any given pair of structuples can be characterized by one structuple being larger or smaller than the other or by both being equal to one another.

A structuple is then larger than another, when at least one item or struct is greater than the corresponding struct of the compared profile and when all other structs demonstrate as equally high scores as the compared profile, e.g. "0122" would be larger than "0112". Conversely, this principle also holds for the "smaller than" relationship. To equate two structuples, the values of all individual structs must agree with each other. If all observed pairs of structuples demonstrate one of these relationships and are thus comparable, a complete order exists, which is also known as a Guttman scale. However, in reality, we can hardly expect this kind of one-dimensional "scalability" of complex phenomena (Borg and Shye 1995: 107, Merschrod 1980: 635). Instead, we must assume that a considerable amount of the empirically observed structuples is characterized by its lack of comparability.

We are dealing with an incomparable pair of structuples when one of the structuples demonstrates a higher value for at least one struct, while the other shows a higher value on at least one other struct (e.g. "01122 vs. "1012"). A scalogram that contains non-comparable item profiles can only be illustrated along two or more dimensions (Levy 1998: 5). With the POSAC technique, these structuples which are only structured by a semi-order are illustrated in two-dimensional fashion by maintaining the original order relationships, including the incomparability to the greatest possible extent. The number of structs of a structuple is reduced to two coordinates in the illustration, without any changes in terms of the ordered relationships between the observations. Figure 1 shows the POSAC-solution for the four items involving the depth of transformation described above, in which the structuple size was weighted for the respective number of observations for the graphic presentation.

Figure 1: POSAC-Solutions for indicators of the depth of transformation



Note: Amount of correctly represented pairs of structuples = 1.00, N = 21 Countries x 21 Years = 441, Struct order = Privatization | Corporatization | National Liberalization | International Liberalization. Size of the structuple is not proportional to the observed number (Weighting = Natural logarithm from (1+number of observations)). "Posac" in SYSTAT 10 was used to carry out the POSAC analysis.

Figure 1 is indicating that within the universe of 3^4 = 81 theoretically possible state space profiles only 18 were observed. The absence of a large number of theoretically possible structuples is a necessary condition to depict the actually observed structuples in spatial form with fewer dimensions as items (Levy 1998: 5). As the coefficient for the amount of cor-

rectly represented structured-pairs with a score of 1.0 indicates, the semi-order of the structuples can be perfectly reflected in two dimensions (Borg and Shye 1995: 113). All four directions of the illustration play a role in the interpretation of the results (Levy 1998: 9). A detailed examination of the distribution of the values of individual items leads us to the conclusion that the x-axis is dominated by both liberalization items and the y-axis by the privatization indicator. The role of the corporatism item is not unambiguous. In most countries, the transformation of the telecommunications administration into one company was not merely a logical prerequisite for the later privatization, but also preceded market liberalization[6]. The diagonal line from the bottom left to the upper right, also known as "joint dimension" (x + y), reflects the overall extent of the reforms. The "lateral dimension" (x - y) from the upper left to the bottom right represents the qualitative differences in the telecommunication reforms spanning from far-reaching privatization without liberalization to comprehensive market liberalization without privatization. Particularly noteworthy is the minute variation along this qualitative dimension in comparison to the dimension of the extent of transformation. As the research question concerns the general depth of transformation in the telecommunications sectors, the "joint dimension" will be used as a dependent variable in the following analysis.

Veto Players and institutional limitations

As already described in the theoretical section of the analysis, we will compare the explanatory power of the veto player theory (Tsebelis 1995, 2002) with a broader and more differentiated concept of structural behavioral restrictions. In doing so, we shall not dispute the influence of the number of veto players identified by Tsebelis on the capacity for change of a political system. Alone the higher transaction costs involved with negotiations and coordination between many veto players decreases the probability of policy change. We argue instead that the influence of party-political veto players on the capacity for change of political systems is greatly overestimated in his theory, whereas the role of institutional as well as informal societal veto players is not adequately taken into account.

For example, institutional veto players such as a president or a second legislative chamber were regarded as equivalent to party-political veto players in the governing coalitions. Additionally, in their empirical operationalization these are only counted as veto players, when they dispose of a formal veto right and when the policy preferences of the actors that control them can be distinguished from those of the governing coalition. In practical terms, this has the consequence that the veto player index only consists of the number of governing parties with a very few exceptions. Only the presidents in France and Portugal and the Bundesrat in Germany are counted as institutional veto players, when the office holder does not belong to a governing party or when the governing coalition does not have its own majority in the second chamber (Tsebelis 1999: 593-594).

The equal treatment of institutional and party-political veto players has already been the subject of significant criticism (Armingeon 2002, Birchfield and Crepaz 1998, Crepaz 2002, Ganghof 2002, 2003, Swank 2002: 44-51). Birchfield and Crepaz (1998) differentiate between collective and competitive veto players[7]. Unlike competitive institutional veto players, collective party players are accordingly characterized by their shared responsibilities without protection from different institutions with mutual veto power (Crepaz 2002: 174). In similar fashion, Lijphart (1999: 184) differentiates between the dispersion of power in consensus democracies into "joint power" within an institution and "divided power" between institutions.

Generally speaking, the assumption of pure pursuit of political interests upon both which Tsebelis' model and ultimately the equal treatment of party and institutional veto players is also based, is questionable (Ganghof 2002:18-24). Political actors pursue not only political goals, but also strive to be elected or safeguard their share of power. Coalition parties prefer to press ahead with "logrolling", to avoid endangering their own position in the government. They have strong incentives to accept compromises. Government parties are normally more capable of raking in the "fruits" of policy change with the voters. Opposition parties in federal or bi-cameral legislative

[6] With the exception of Sweden, structuple "0022" for 1991 and 1992.

[7] Kaiser (1997: 436-437) argues for even further distinctions between types of veto points .

sition parties in federal or bi-cameral legislative committees, on the other hand, have little reason to cooperate with the government, as long as they are not offered significant and thus obvious concessions, even if the intended policy measure on behalf of the government comes close to their ideal position (Ganghof 2003: 13-17). Even if the institutional actors are controlled by party members of the governing coalition, it may indeed be advantageous for them to make a name for themselves as advocates of regional interests at the cost of the government.

A further factor that exerts an influence on a political system's capacity to act are societal veto players (to stay within the terminology), whom are conventionally granted a right to participate in the formulation of policies (Häge 2003). This informal influence of organized interests on the policy process is completely neglected in Tsebelis' theory. In corporatist states with less centralized and tightly organized interest groups, which also have institutionalized relationships with the administration and government, it is potentially more difficult for governing parties to directly transform their preferences into political measures. On the other hand, pluralist interest group systems, in which an array of weakly organized associations compete for access to and influence over the political decision making process, hardly restrict the government in terms of its room to maneuver.

Thus, the explanatory power of the veto player approach will be compared here with the overall concept of the "three types of negotiational democracy" (Armingeon 2002: 82). The veto player concept is thereby dissected into consensual/cooperative and contramajoritarian/competitive elements and the corporatist aspect is added to it. In the analysis, we apply Tsebelis' veto player index based on the same argument that Tsebelis (2002: 165) uses in the estimation of preferences in his empirical policy games, the legislation of significant labor laws. Also in our case, privatization and liberalization is strongly related to the left-right dimensions of party systems. The ideological positions of the various parties then may be used as approximations for their ideal positions in the spacial model. On the other hand we use Siaroffs' corporatism index (1999) as an indicator of societal veto players and indicators for collective or separate responsibilities and power, which are based on data from Lijphart (1999). The average of the z-values of the first two items of the executive-parties-dimensions by Lijphart (effective number of parliamentary parties and minimum winning one-party cabinets) is constructed as an indicator for the empirical constellation of actors in the government and parliament, i.e. the collective veto players. By focusing on parties and one-party cabinets we gain a grasp of the core structural conditions of consensus democracy, avoid dubious assumptions in the construction of the indicator as well as obvious measurement problems of other items of the executive parties dimension (Armingeon 2002: 89).[8]

The same approach was also chosen for competitive veto points. Instead of using Lijphart's entire federal-unitary dimension as a variable, the z-values were averaged for federalism and bicameralism. This enabled us to simultaneously pinpoint the primary features of the governmental system (Fuchs 2000: 40) and the major constitutional stipulations for contramajoritarian restrictions (Kittel and Obinger 2003: 30). This should not exclude the possibility that constitutional rigidity or an active constitutional court might function as institutional restrictions. However, it can also be assumed on plausible grounds that they are causally related to federalism (Lijphart 1999: 4)[9]. This would mean that the latent construct "contramajoritarian restrictions" could be sufficiently constructed by the more economical variable with only two items (Fuchs 2000: 44).

Table 2 depicts the correlation matrix of these variables. For the sake of comparison, the table also contains the correlations with two other prominent institution-indices, the measure of institutional limitations on the central government according to Schmidt (1996), and the indicator for the constitutional structure of the state by Huber, Ragin, and Stephens (1993). The veto player indicator by Schmidt (2000) is thus of great interest, because it strives to reflect as many potential veto points as possible, i.e. both primary as well as secondary institutional and party-political veto points.

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[8] For a critique of the measurement of the item "dominance of the executive" see Tsebelis (2002: 109-114).

[9] According to these federalism theories, bi-cameralism would also be a result of federalism to guarantee the division of competences between different regional authorities. As Lijphart's (1999: 213-215) empirical analysis demonstrates, though, federalism is at most a sufficient and not a necessary condition for the establishment of a strong second legislative chamber.

Table 2: Correlation matrix of political institutional variables

	Tsebelis (1999)	Collective VP	Competitive VP	Schmidt (1996)	Huber et al. (1993)	Schmidt (2000)
Collective VP	0.81*** (0.000)	1.00				
Competitive VP	0.24 (0.294)	-0.01 (0.964)	1.00			
Schmidt (1996)	0.33 (0.141)	0.06 (0.786)	0.86*** (0.000)	1.00		
Huber et al. (1993)	0.20 (0.377)	-0.14 (0.545)	0.85*** (0.000)	0.87*** (0.000)	1.00	
Schmidt (2000)	0.45** (0.040)	0.23 (0.314)	0.77*** (0.000)	0.62*** (0.003)	0.58*** (0.006)	1.00
Corporatism	0.35 (0.122)	0.62*** (0.003)	0.06 (0.802)	0.07 (0.779)	-0.11 (0.652)	0.21 (0.368)

Note: Correlation coefficients are based on z-standarized variables, p-vales in parentheses, N = 21; * significant on the 10%-level, ** significant on the 5%-level, *** significant on the 1%-level, two-tiered tests, calculations carried out by "pwcorr" with Stata 8; All variables that vary over time are average scores for 1980 through 2000.

The empirical relationships between the variables are for the most part consistent with the conceptual reflections. The index for competitive veto points correlates well with the indicators by Schmidt (1996) and Huber et al. (1993), which are equally composed of purely formal institutional features of the government and election system (Fuchs 2000: 40). It also appears to be closely related to Schmidt's comprehensive veto player index, which in turn correlates with the Tsebelis' (1999) variables to a considerable extent. This is not surprising in light of the integration of consociationalism and coalition governments as items into the construction of the veto player index by Schmidt (2000).What is striking though, is that it does not significantly correlate with the variable for collective veto points, but it does best correlate with it in comparison to the formal-institutional indices. This, in turn, demonstrates an extremely strong relationship with Tsebelis' veto player indicator (1999) and thus suggests that both underlying concepts can hardly be differentiated in empirical terms. It is also interesting to note that the corporatism variable correlates very well with the indicator for collective veto points and thus confirms Lijphart's results (1999: 244).

The results of the principal components analysis (PCA) in Table 3 support the assumption that the variables reflect at least two different constructs. The first component appears to concern formal-institutional restrictions of the government, while the second component depicts empirical actor constellations in the government and parliament. The high correlation between corporatism and the variable for collective veto points is symbolized here by the strong loading of corporatism on the second dimension. This relationship is relativized, if we were to look at the degree of variation of the corporatism variables, which is not represented by the two components. Nevertheless, 43% of the variation of the indicator cannot be attributed to either of the both components. In many countries, corporatism and consensual political constellations have historically developed parallel to each other, although this was not the case in a significant number of countries (Armingeon 2002: 88, Keman and Pennings 1995: 274). If we now were to integrate both concepts into one single indicator, as Lijphart does, different effects cannot be identified.

Table 3: Principal Component Analysis of the Institutional Variables

Variable	Component 1	Component 2	Non-repr. variation
Tsebelis (1999)	0.28	0.83	0.23
Collective VP	-0.05	0.96	0.08
Competitive VP	0.96	0.04	0.08
Schmidt (1996)	0.93	0.09	0.14
Huber et al. (1993)	0.94	-0.11	0.11
Schmidt (2000)	0.78	0.33	0.29
Corporatism	-0.04	0.75	0.43

Note: The analysis is founded upon z-standardized variables, N = 21, Varimax Rotation, Extraction of all components with an eigenvalue > 1; all variables that vary over time are average scores from 1980 through 2000; The analyses calculated by "factor, pcf" in Stata 8.

After discussing the indicators, the statistical model to explain the dynamics of the transformation process will be presented in the next section. Subsequently, we offer results for the different explanatory approaches discussed here. In the following section, the change over the entire time period will be examined by means of a regression analysis. This enables us to identify the effects of the variables on the aggregated extent of transformation.

The Determinants of the Transformation Process

The dependent variable "depth of transformation" demonstrates an exceptional data structure. The scores of a country do not vary continually over time. Changes can only be determined for the years, in which reforms were carried out. The variable remains at a constant level between these more or less long periods of time. A pooled time-series and cross-section analysis is thus not appropriate due to the low

degree of variation of the dependent variable. In principle, an event data analysis would also be conceivable, but this would neglect information on the extent of the reform step. To examine the influence of the explanatory variable on the dynamics of the transformation process, we will thus fall back upon the "continuous state space failure time process" model, which was developed by Petersen (1988, 1995: 483-488) especially for such "leaps".

This entails a two-level procedure in which different questions are answered (see Petersen 1988: 139). By means of a common event data analysis we will initially examine what the length of the time spans between changes in the dependent variable reveals. The factors that determine which new score the variable assumes in the case of such a change can then be identified by a regression analysis. This separated estimation of the parameters is based on a trait of the destination-specific rate of transition for continual variables: "The rate of transition to a specific state equals the overall rate of transition times the probability [density] that the specific state was entered, given that a transition occurred" (Petersen 1988: 139). The event data analysis is applied to estimate the general rate of transition and the regression analysis serves to estimate the density for the new score of the dependent variable after a transition. Under the assumption of an independent distribution of unobserved terms of heterogeneity and no functional restrictions between the parameters of both estimating equations the two likelihoods can be determined separately by the described techniques (Petersen 1988: 147).

To pinpoint the influence of the independent variables on the general rate of transition, the semi-parametric "Cox proportional hazards model" is used. In contrast to parametric techniques, it has the advantage that the form of the baseline hazard function does not have to be specified a priori. The parameter can indeed be estimated more efficiently, when the functional form of the baseline hazards is known. However, an incorrect assumption on this form can lead to misleading results (Cleves et al. 2002: 113-114). Due to the lack of unambiguous theoretical underpinnings, we will refrain from such an assumption. A further advantage of semi-parametric models is that the definition of the beginning of the risk time period does not play a significant role. In telecommunications the first extensive reform measures were implemented in the beginning of the 1980's. However, it is uncertain when OECD countries were initially exposed to the "risk" of such reform steps. Did this happen when Margret Thatcher took office in Great Britain in 1979, several years earlier when liberalization took off in the United States, or in the early 80s, when regulatory reform in the US lead to the divestiture of the AT&T? While semi-parametric models only use "time" to order the data, determining when the risk emerged is of crucial significance for most parametric models, meaning that a change in the initial point in time is also reflected by the altered estimate results (Cleves et al. 2002: 24-27).

As most of the countries examined here have carried out reforms in several steps, for which interdependences within a country cannot be excluded, the hypothesis tests are based on robust standard errors. Corrections are thus made for country-specific influences (Box-Steffensmeier and Zorn 2002: 1072). Through stratification, different baseline hazard rates are allowed for different reform steps as well. We can assume that the baseline hazard rate of the first transformation step, for example, differs significantly from that of the third or fourth step (see Box-Steffensmeier and Zorn 2002: 1074 Fn. 7). The general beginning of the risk time-frame is 1981, in which the conservative government in the United Kingdom implemented the first reform measure. For each country, each point in time up to the complete transformation is included in the analysis. Ten of the analyzed countries have yet to reach the maximum score on the transformation scale by the year 2000. The final units of analysis of these countries are thus legally censored. The OLS-regression traces the main determinants of the new degree of reform depth under the condition that a change has taken place. This conditional random sample is thus only composed of observations that indicate a change in the dependent variable.

Table 4 shows the results of the combined analysis for different model specifications. Along with the variables that substantially interest us here, various control variables were added into the models. The existing depth of transformation before the change serves to control the initial level. The role of Europeanization is constructed by a dummy variable, which assumes the value 1 starting in 1988, if the country at hand was a member of the European Community/Union. This point in time was chosen because the European Community had begun to actively promote the harmonization and liberalization of the European Telecommunications Markets with its Green Paper for the "development of a Common Market for Telecommunications Services and Institutions" published in mid-1987 (Bauer 2002, Schneider 2001b: 62-65,

Grande 1994: 143-144). In order to take the potential effects of globalization into account, the degree of trade dependence is used, which measured by the sum of exports and imports in relation to the gross domestic product (GDP) as well as international financial market ties, approximated by the indicator for financial market deregulation by Quinn (1997). Both Europeanization as well as globalization are generally considered to be one of the driving forces for deregulation and liberalization (Häge and Schneider 2004).

Along with these international influences, features of the national economy as a whole and the telecommunications market, in particular, may also have a potential impact on the transformation process. To test the overall economic development, the percentage of yearly change of the GDP is incorporated into the model. Three further indicators serve to illustrate features of the telecommunications market. The size of the market is depicted by the number of conventional fixed-line connections. The number of fixed connections per employee and the revenue per fixed connection serve as proxies for productivity and price level (Boylaud and Nicoletti 2000: 18-19). Countries with strong economic growth, a large national market, lower prices and high productivity are thus less susceptible to reforms.

Along with the indicators for institutional restrictions mapped out in the previous section, the ideology of the government also plays an important role as a variable of political influence. In line with the classical party difference thesis (Hibbs 1977, 1992, Schmidt 1996, 2002), we can assume that socialist and social democratic governments are less convinced of the merits of the market and favor state intervention more than conservative and liberal parties. We therefore use the number of cabinet positions that are held by right and center parties as an indicator for the ideology of the government. As diagnostic techniques have shown after the first model estimate, the ideology variable greatly interacts with the time of analysis in the Cox regression (see Box-Steffensmeier et al. 2003). For a better comparison of the results of both techniques of analysis, this term of interaction will also be taken into account in the OLS-estimate.

The majority of variables added to the analysis are based on the scores of the previous year, in order to avoid potential endogeneity problems. For financial market openness, on the other hand, a 3-year time-lag will be used, because the indicator does not measure the actual capital market dependence, rather the formal openness of the financial markets. Thus, as is the case with the dependent variable, we are dealing here with an indicator of deregulation. The larger time-lag serves to prevent a potential relationship between these variables by unobserved common causal variables. As the competitive and collective veto-point indices are temporally constant indicators, a temporal shifting of the scores is not necessary.

Table 4: Determinants of the Transformation Process

	(1) Veto Player		(2) Veto Player and Corporatism		(3) Alternative Institution-Indices and Corporatism	
	Cox	OLS	Cox	OLS	Cox	OLS
Depth of Transformation t-1	-0.509	0.582	-1.052	0.625	-0.806	0.604
	(0.75)	(16.79)***	(1.45)	(14.91)***	(1.02)	(15.45)***
International Factors						
Europeanization t-1	0.792	-0.086	0.699	-0.072	0.481	-0.080
	(2.45)**	(2.70)**	(2.00)**	(2.67)**	(1.60)	(2.65)**
Openness of Financial Markets t-3	0.259	0.005	0.303	-0.000	0.363	-0.001
	(2.47)**	(0.52)	(2.62)***	(0.01)	(3.42)***	(0.11)
Trade Dependence t-1	-0.572	0.055	-0.443	0.055	-0.295	0.056
	(1.53)	(1.26)	(1.02)	(1.42)	(0.78)	(1.38)
Economic Factors						
Economic Growth t-1	-0.095	-0.000	-0.097	-0.001	-0.096	0.000
	(1.25)	(0.08)	(1.29)	(0.15)	(1.35)	(0.00)
Size of Network t-1	0.229	0.184	0.145	0.227	1.140	0.240
	(0.28)	(3.21)***	(0.16)	(4.08)***	(1.50)	(3.82)***
Productivity t-1	-0.605	0.069	-0.461	0.048	-0.332	0.075
	(1.74)*	(2.94)***	(1.24)	(2.15)**	(0.85)	(3.07)***
Price Level t-1	0.193	0.010	0.206	0.010	0.238	0.010
	(2.68)***	(2.06)*	(2.35)**	(2.34)**	(3.02)***	(1.91)*
Political Factors						
Government Ideology t-1	1.410	-0.099	1.421	-0.101	1.297	-0.109
	(2.41)**	(1.92)*	(2.54)**	(1.80)*	(2.61)***	(1.91)*
Interaction Government Ideology over time	-0.245	0.008	-0.263	0.009	-0.205	0.012
	(3.52)***	(1.02)	(3.44)***	(1.14)	(3.41)***	(1.32)
Veto Player t-1	*0.104*	*-0.006*	*0.156*	*-0.013*		
	(0.95)	*(0.47)*	*(1.27)*	*(1.11)*		
Corporatism t-1			*-0.291*	*0.029*	*-0.301*	*0.034*
			*(2.10)***	*(2.09)***	*(2.94)****	*(2.17)***
Collective Veto Points					*0.215*	*-0.028*
					(1.21)	*(1.35)*
Competitive Veto Points					*-0.392*	*-0.015*
					*(2.16)***	*(1.24)*
Observations	379	65	379	65	379	65
Units of Analysis	75		75		75	
Events	65		65		65	
Countries	21	21	21	21	21	21
Wald Test	43.67		35.90		178.74	
Likelihood	-126.64		-125.02		-123.15	
R-squared		0.87		0.88		0.89
F Test		250.45		140.10		191.37

Note: * significant on the 10%-level; ** significant on the 5%-level; *** significant on the 1%-level, two-sided tests, all variables centered around the average score. ● Cox: Cox proportional hazards model, dependent variable is the time-span between two transformation steps, z-values in parentheses are based on robust standard errors, Efron-Approximation for ties, stratified by the number of the reform step (1, 2, 3 and >4), Calculations by "stcox" in Stata 8. ● OLS: Ordinary least squares regression, dependent variable is the new level of the depth of transformation after a change, t-values in parentheses are based on robust standard errors. These contain contrasts, but they are not shown; Calculations with "regress" in Stata 8.

We have developed three models in line with our research question. Besides the control variables, the first model only contains the veto player index by Tsebelis (1999) as an independent variable for institutional limitations. The second model then integrates the indicator for corporatism. This model is then in turn compared to the third, which instead of the individual veto player indicator consists of the variables for competitive and collective veto points based on Lijphart (1999).

Firstly, it is evident that the results for the control variables are highly stable beyond the various model specifications. As for the international factors, a high level of international capital market integration increases the probability of a reform measure, although there are no visible effects on the extent of the transformation. Europeanization increases the risk of a change as well, but it at the same time also correlates negatively with the extent of individual reform steps. The European Commission seems to have triggered an incremental change here. As with economic growth, trade dependence shows no effect on the transformation process.

The productivity and the size of the network demonstrate a positive relation with the depth of transformation. Contrary to expectations, larger and more productive telecommunications sectors have thus been transformed through greater reform steps. However, the influence of these variables on the risk of a transformation step cannot be proved with certainty. The coefficient for productivity indeed does demonstrate the expected negative relationship, but loses its substantial and statistical significance as soon as the corporatism index is added to the estimating equation (Model 2). Only the price level correlates positively with both the probability of a reform step as well as with the extent of it. High prices for telephone services thus gave reason for relatively radical, i.e. thus successive and far-reaching reform measures.

The results for the governmental ideology show a similar pattern to that of the results for Europeanization. The more center and right-wing parties are represented in the government, the greater the "danger" of a reform step. If such a reform step did indeed take place, it turned out to be more moderate than under governments that were dominated by left parties. Center-right governments can thus also be identified as an explanatory factor for a more or less incremental change. However, this claim must be given some further thought. The strong interactive effect with time indicates that governmental ideologies only have an influence on the probability of a further change in the first years after a reform step. In somewhat speculative terms, we could interpret this result as signifying that center-right, conservative governmental dominance constitutes a necessary, but by no means sufficient condition for rapidly succeeding steps toward transformation. However, a correlation between the time of analysis and the government's ideology in terms of the depth of the transformation cannot be clearly determined. Even center-right governments, whose reform steps were far apart from each other, would have accordingly carried out significantly smaller reform measures than left-oriented governments.

Our principal question in this paper focuses on institutional effects. In this respect, an important result is that the number of Tsebelis' veto players does not show the expected effect, neither in the first nor in the second model. The relationships are statistically insignificant and in the case of the Cox-Regression the coefficient even shows the opposite sign. Model 2 also illustrates what influence informal institutions can have, though. On the one hand, corporatist interest group systems have significantly "eased" the risk of a transformation step. On the other hand, however, these few steps tend to be much greater. This result also remains robust, if we were to observe both indicators for competitive and collective veto points in the analysis (model 3) instead of the veto player index. As expected, the results for the collective veto point indicator are very similar to those of Tsebelis' veto player index. None of the relationships is statistically significant and the coefficient from the event data analysis has a positive sign, and not the forecasted negative sign. The indicator for competitive veto points, however, has a statistically and substantially significant negative relationship to the risk of a reform step. However, we could not determine an unambiguously negative correlation with the depth of reform. Competitive veto points have accordingly not limited the extent of individual steps towards transformation, but instead prevented such reform measures from being carried out in the first place.

The analysis up to now has served to identify the main determinants of the dynamics of the transformation process and pinpoint, in particular, the role of institutional arrangements. The ramifications of these institutional factors on the long-term extent of the transformation will now be analyzed by an OLS regression of the overall change over time.

The Determinants of the Long-Term Depth of Transformation

The analysis of the difference in the depth of transformation in the year 2000 as opposed to 1980 is complicated by several problems. To test the initial level, the status quo in 1980 has to be taken into account in the model as an independent variable. As Model 1 in Table 5 shows, this variable alone already explains 96 percent of the variation of the dependent variable. On the one hand, this confirms the theories predicting convergence towards a new unified organizational model in the telecommunications sector (Schneider and Tenbücken 2004). On the other hand, this result is also a consequence of the relatively rough operationalization of the construct that is to be explained. A more detailed measurement by further items and/or a further differentiation of the intensities of the items would certainly water down this effect (Tenbücken 2004). We can thus assume that the actual influence of the initial level is overestimated at the cost of the substantially more interesting independent variable.

Table 5: Political Determinants of the Depth of Transformation

	(1)	(2)	(3)	(4)	(5)
	Basic Model	Veto Players	Veto Players & Corporatism	Alternative Institutional Indices	Alternative Institutional indices & Corporatism
Status Quo 1980	-0.906 (31.64)***	-0.907 (30.61)***	-0.962 (24.46)***	-0.890 (24.84)***	-0.934 (21.35)***
Veto Players		-0.009 (1.07)	-0.002 (0.41)		
Corporatism			-0.024 (2.29)**		-0.021 (1.82)*
Collective VP				-0.013 (1.31)	-0.002 (0.24)
Competitive VP				-0.019 (2.16)**	-0.014 (1.66)
R-Square	0.96	0.97	0.98	0.97	0.98
F Test	1001.28	650.91	661.84	417.62	469.61
Countries	20	20	20	20	20

Note: * significant on the 10%-level; ** significant on the 5%-level; *** significant on the 1%-level, two-tiered tests, ordinary least squares regression, the dependent variable is the difference in the level of transformation depth in the year 2000 in comparison to 1980, t-values in parentheses are based on robust standard errors; containing contrasts, which are not shown, though; for corporatism and veto players, the arithmetical average was calculated for the country-specific time-frame from 1980 up to the year in which the maximum depth of transformation was reached; the other variables are constant over time; calculations by "regress" with Stata 8.

Furthermore, the small number of cases is problematic for a statistical analysis. The possibilities of incorporating control variables are thus extremely limited. Moreover, we were forced to exclude Greece from the analysis because this country can be viewed as an outlier that had an unjustifiably large influence on the estimated results[10]. Besides the institutional variables that interest us here, the calculations thus were based only on the status quo in 1980 to control the initial level. A similar procedure was chosen for the analyses, as was the case with the models to examine the dynamics of the transformation process.

Besides the status quo variable, Model 2 in Table 5 only contains the veto player index by Tsebelis. For this indicator and for the corporatism variable, we calculated the average of the scores over the time period from 1980 up to the year, in which the maximal depth of transformation was reached. Neither in Model 2 nor in Model 3 with corporatism is there any evidence that would enable us to preliminarily confirm the veto player hypothesis. However, a high degree of corporatism seems to have restricted the overall extent of the reform measures. If we now were to compare the veto player model (2) with both alternative institution-indices in Model 4, we wind up in turn with a negative effect of contra-majoritarian institutions as well as similar results for the indicators for collective veto points and Tsebelis' veto players. The strong negative effects of corporatism and competitive veto player are somewhat relativized, however, when one takes both relationships in the same estimating equation into consideration. The t-statistics of both variables turn out to be much smaller in Model 5 and the intensity of the effects has slightly tapered off. While the correlation between corporatism and the depth of transformation is still statistically significant on the 10%-level, this is slightly surpassed by the competitive veto point variable with a p-score of 0.117.

Conclusions and suggestions for further research

The principal goal of this paper was to inquire into the effects of political institutions on the action capacity of national political systems to transform the institutional status quo of their telecommunication systems from public monopolies to private markets. As the most prominent institutionalist model we tested Tsebelis' veto player theory. The results indicate that this veto player model is not be supported by our analyses, while our distinction between collective and competitive veto points has proven to be

[10] The Cooks D-score for Greece is more than three standard deviations above the average score of all countries in all calculated models (between 0.76 and 1.41, with an average of 0.06 up to 0.10 and a standard deviation from 0.16 through 0.30).

fruitful. The latter clearly had discernible effects on policy change. Countries with contra-majoritarian institutional structures such as federalism and bicameralism have carried out fewer reform measures, and there are some, albeit somewhat uncertain indications, that these restrictions have in general led to a less extensive transformation. In addition, we have shown that the structural configuration of interest group systems emerged as one of the main explanatory factors both for the dynamics as well as the extent of the transformation. In the analysis of the transformation step, it turned out that corporatist countries indeed carried out extensive reform measures, although these took place rather infrequently. As is demonstrated by the regression analysis of the extent of transformation, this generally resulted in less change in the telecommunications sector. Thus future efforts to identify causal relationships should not disregard the relative explanatory power of these additional variables and hence their relevance in political practice. The results further suggest that the formal institutional features of the governmental systems and the actor constellations they produce in the government do not induce political change to the same extent as the degree of organization of interest groups and their rather informal patterns of interaction in politics and public administration.

These findings point to theoretical and substantial suggestions. Our theoretical suggestions point to the central weakness of the model, which many scholars conceive as its principal strength: its parsimonious feature to reduce multiple institutional facets of modern political systems to a single, rather magical figure - the number of veto players. Veto player theory in essence seems to be caught by the "myth of simplicity" (Bunge 1963). A more promising approach for future research would be to refine political theory to take into account the different behavioral logics of ruling party coalitions, institutional veto powers such as federalist or supranational levels, or the logic of corporatist bargaining with organized interests. Czada (2003) has urged to differentiate between these three logics of political interaction and not to fuse them into one single dimension. Also Ganghof (2003: 18-19) has offered some suggestions along these lines.

Substantial implications of our findings are that institutional effects in this great transformation towards privatized infrastructures seem to be less important than hitherto suggested by institutionalist approaches. Our findings are consistent with observations made by Bartle (2002: 24) in a qualitative comparison of reforms of telecommunications and electricity in Germany, France and Britain. He came to the conclusion that, while institutions may be important in a shorter-term perspective, “a longer term perspective on the shift from monopoly to market orientation shows that institutions no longer matter.” Within the last decade ideological and economic pressures toward privatization became so strong that all countries, regardless of their ideological orientation and “stock” of institutional structures have joined the global privatization movement. This policy blueprint is not only embraced by the OECD countries, but also by a growing number of developing countries in Africa, Latin America and Asia. Important topics for further research are the development of more thorough models of the causes of this convergence and of the diffusion of institutional change across countries and regions.

Data appendix

Transformation depth:
Description: Extent of transformation in telekommunications towards deregulation, liberalization and privatization.
Computation: „Joint-dimension“ of POSAC analysis of items corporatization, privatization, liberalization national and international.
Source: see description of individual items.

Corporatization:
Description: Ordinal variable with attributes 0 = Public Administration, 1 = mixed and 2 = private corporation; refers to organizational form of dominant operator.
Source: “Status of telecommunication operator and regulatory bodies”, p. 14 in OECD (1993).
Supplementary sources for various countries:
Italy: Telecom Italia. http://www.telecomitalia.it/
Austria: Kulturinformationssystem AEIOU. http://www.aeiou.at/ (13.08.2003).

Privatization:
Description: Ordinal variable with attributes 0 = none, 1 = partly und 2 = complete material privatization of dominant telecommunications provider.
Computation: Privatisierung = 0 if |TSO7000-100| = 0; Privatisierung = 1 if 0 < |TSO7000-100| < 100; Privatisierung = 2 if |TSO7000-100| = 100.
Previous name of variable: TSO7000
Source: Schneider et al. (2004).

Liberalisierung national:
Description: Ordinal variable with attributes 0 = Monopol, 1 = Duopol und 2 = Wettbewerb, bezieht sich auf den Grad der Liberalisierung des Markts für nationale Ferngespräche.
Previous name of variable: Telecommunications / basic voice / trunk : Year of liberalisation (1984-1997).
Source: OECD (2000).
Addendum form the same source by variable: Telecommunications / basic voice / trunk : Liberalisation of entry.

Liberalisierung international:
Description: Ordinal variable with attributes 0 = Monopoly, 1 = Duopoly and 2 = Competition. Refers to the degree of liberalization of international telephony.
Previous name of variable: Telecommunications /basic voice /international: Liberalisation of entry (1984-1997).
Source: OECD (2000).
Addendum from the same source by variable Telecommunications /basic voice /international: Year of liberalisation.
Supplementary sources for various countries:
Kanada: "Intl." in Table 1: Regulation of entry and foreign investment, 1998, p. 28 in Boylaud and Nicoletti (2000).

Tsebelis (1999)
Description: Number of veto players according to Tsebelis (1999).
Previous name of variable: vps
Source: Tsebelis (2002b).
Supplementary sources for various countries:
Italy, NZL, Norway, Switzerland 1996 to 2000: Ruud Koole und Richard S. Katz (Hrsg.): Political data yearbook. European Journal of Political Research 32 (1997), 34 (1998), 36 (1999), 38 (2000), und 40 (2001).
Greece: "gptys" (file "wish9.sav") in Cusack and Fuchs (2002).
USA: constantly three veto players; see P. 449-450 in Tsebelis (2000).

Collective Veto Points:
Description: Partisan veto points, arithmetic mean of effektive number of parties in parliament and share of minimal-winning single party cabinets according to Lijphart (1999), see also Armingeon (2002: 89).
Computation: Collective Veto Points = Arithmetisches mean of z standardized variables leff2 und -(lmin2).
Previous names of variables: leff2, lmin2.
Source: Armingeon et al. (2002).

Competitive Veto Points:
Description: Institutional Veto Points, arithmetic mean of bicameralism and federalism according to Lijphart (1999); see also Kittel and Obinger (2003).
Computation: Competitive VP = arithmetic mean of z standardized variables lfed2 und lbic2.
Previous names of variables: lfed2, lbic2.
Source: Armingeon et al. (2002).

Schmidt (1996):
Description: Institutional constraints of central government according to Schmidt (1996). Additive index of six dummy variables. Constraints are: EU membership, Federalism, constitutional rigidity, strong bikameralism, autonomous central bank, referenda.
Computation: Schmidt (1996) = instcons - 1 if country is more than 50% of the time span 1960 - 1990 EU-member.
Previous variable name: instcons
Source: Armingeon et al. (2002).
Suppelementary sources for 1991 to 2000:
"Counter-majoritarian constraints of central government" (minus 1 if country is EU member in 2000) in Table 8.2: Constitutional structures and veto players in 23 economically advanced democracies in the year 2000, P. 177-178 in Schmidt (2002).

Huber et al. (1993):
Description: Constitutional structure of the state according to Huber, Ragin & Stephens (1993). Additive Index of five indicators: Federalism (absent = 0, week = 1, strong = 2); Parlamentarism (= 0) vs. presidential or collegial government (= 1); proportional representation (= 0), modified proportional presentation (= 1), single- member, simple plurality system (= 2), Bicameralismus (absent = 0, weak = 1, strong = 2), Referendum (absent or infrequent = 0, frequent = 1).
Previous variable name: structur
Source: Armingeon et al. (2002).
Suppelementary sources for 1993 to 2000:
"Index of constitutional structures" in Table 8.2: Constitutional structures and veto players in 23 economically advanced democracies in the year 2000, p. 177-178 in Schmidt (2002).

Schmidt (2000):
Description: Number of veto players according to Schmidt (2000). Additive index based on 10 dummy variables indicating the presence of a veto player by 1. Veto players are: Consociationale democracy, federalism, autonomous central bank, judicial review, EU membership, minority protection, Bicameralism, coalition government, self-regulation/administration in social policy, direct democracy.
Computation: Schmidt (2000) = Veto player-index - 1 if country is EU member in 2000.
Previous name of variable: Veto player-index.
Source: Table 8.2: Constitutional structures and veto players in 23 economically advanced democracies in the year 2000, P. 177-178 in Schmidt (2002).

Corporatism:
Description: Index for integration/centralization of the representation of business according to Siaroff (1999). Arithmetic mean of 8 indicators with integer values between 1 and 5. Three indicators for social partnership, two for coordination at industral level and three for the style of policy-making at national level.
Computation: Values between 1980 and 1990 as well as between 1990 and 1995 have been interpolated. For Geece, Spain and Portugal we used the value of 1990 for pre 1990 values. For the time after 1995 we used 1995 values.
Previous name of variable: integr.
Source: Armingeon et al. (2002).

Governmental ideology:
Description: Sum of cabinet seat shares of centre or right parties according to the classification of Schmidt (1996).
Computation: Governmental ideology = (govright + govcent)/100
Previous name of variable: govright, govcent.
Source: Armingeon et al. (2002).

Europeanization:
Description: Dummy variable with value = 1 for years after 1987, if a country is EU member.
Computation: Europeanization = 1 if EUMG = 2 and Jahr > 1987.
Previous name of variable: EUMG.
Source: Schneider et al. (2004).

Financial openness:
Description: Index for extent of deregulation/liberalization of financial markets according to Quinn (1997).
Previous name of variable: openness.
Source: Armingeon et al. (2002).

Trade openness:
Description: Sum of export and imports as a share of GDP.
Computation: Handelsabhängigkeit = imex/100
Previous name of variable: imex.
Source: Armingeon et al. (2002).

Economic growth:
Description: Growth of GDP in percent compared to previous year.
Previous name of variable: gdpgr.
Source: Armingeon et al. (2002).

Netzwork size:
Description: Number of fixed telecommunication access channels in 100 Million.
Computation: Network size = Access channels/100000000.
Previous name of variable: Access channels.
Source: OECD (2001).
Supplementary source for 2000: Table 4.1: Telecommunication channels in the OECD area, P. 97 in OECD (2003).

Productivity:
Description: Number of access channels (in 100) per staff in telecommunications.
Computation: Productivity = (Access channels/Total staff in telecommunications services)/100.
Previous name of variable: Access channels, Total staff in telecommunications services.
Source: OECD (2001).
Supplementary sources:
Access channels: see network size.
Total staff in telecommunications services in 2000: Table 8.1: Employment in Telecommunications, 1991-2001, p. 218 in OECD (2003). Missing values for Australia, Ireland, Netherlands, NZL, UK and USA in 1998 have been interpolated.

Price level
Description: Income in constant US Dollars pro 100 Festnetzanschlüsse.
Computation: ((Total PTO revenue in USD * Exchange rates) / Purchasing power parities for GDP) / (Access channels / 100).
Previous variable sources and variable names:
Access channels: See network size.
Total PTO revenue in USD: OECD (2001). Values for 2000 from Table 3.1: Telecommunication revenue in the OECD area, p. 70 in OECD (2003); Exchange rates – national currency per US dollar und Purchasing power parities for GDP – national currency per US dollar: OECD (2002).

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