

Political Holes in the Economy: The Business Network of Partisan Firms in Hungary

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Abstract

This article redirects attention from the question of how business ties have an impact on politics to the question of how political ties have an impact on business. Specifically, do divisions within the field of politics become divisions in the field of business networks? To study co-evolution of political and economic fields, we conducted a historical network analysis of the relationship between firm-to-party ties and firm-to-firm ties in the Hungarian economy. We constructed a dataset of all senior managers and boards of directors of 1,696 corporations and the complete set of all political officeholders from 1987 to 2001. Findings from our field interviews and dyadic logistic regression models demonstrate that director interlocks depend, to a significant extent, on political affiliations. Although the political and economic fields have been institutionally separated, firms and parties have become organizationally entangled. Firms of either left or right political affiliation exhibit a preference for partnerships with firms in the same political camp and increasingly avoid ties with firms in the opposite camp. Our analysis reveals that political camps in the Hungarian economy occurred not as a direct legacy of state socialism but as the product of electoral party competition.

Keywords

business groups, corporate interlocks, historical network analysis, political affiliation, postsocialism

Politics and business are organizationally entangled in every capitalist economy. As a ubiquitous and important feature of the political economy of modern capitalism, analysis of field-spanning ties is a major component of research at the intersection of political and economic sociology. Sociologists have demonstrated that business networks are a predictor of corporate political behavior (Burris 2001, 2005; Davis and Greve 1997; Mizruchi 1989, 1990a, 1990b, 2007). We advance this theoretical agenda by posing a new question: How does the structure of ties spanning the

fields of politics and business shape the structure of network ties within the field of business? In other words, do divisions within the field of politics become divisions in the field of business networks?

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To study the political polarization of business networks, we examine historical co-evolution of the fields of electoral party politics and business networks in Hungary. Our case entails concurrent marketization and democratization in which market-oriented firms and competing political parties developed in tandem. To capture the first moments when such corporate and political entities emerged, our case reaches back to 1987; to cover an entire epoch of economic and political transformation, it extends to 2001.

To analyze co-evolution of the political and economic fields in Hungary, we constructed a dataset that includes the complete set of personnel ties establishing director interlocks between firms as well as political alliances between firms and parties. On the business side, we compiled a list of all economic officeholders in Hungary, consisting of the names of every senior manager and all members of the boards of directors and supervisory boards of 1,696 firms in the country for the entire 15-year period. On the political side, we constructed a list of all political officeholders in Hungary, consisting of the names and party affiliations of every government minister and elected politician, from the Prime Minister and Members of Parliament to all local mayors. By merging the datasets, we were able to identify whether any given firm had a politician among its economic officeholders. Through these personnel ties, we were able to label a firm's political affiliation and register any changes in party attachment throughout the period under study.

During this period, the Hungarian economy was thoroughly marketized, with open competition among firms for capital, labor, suppliers, and customers. At the same time, the Hungarian polity was successfully democratized, with open competition among parties in a democratic electoral system in which incumbent parties were defeated in each of the parliamentary elections in 1990, 1994, and 1998.

The fact that Hungary, by 2001, was a democratic, market economy is important for our case selection. Because our data collection covers the initial period of transition from

monopolistic one-party rule to competing political parties and from a planned to a market economy, as well as the later period of market and democratic consolidation, we could test competing theories about the relationship between business and politics in the post-socialist setting. The first theory views firm-party ties (i.e., existence of politicians on corporate boards) through the lens of the legacy of state socialism. Stark's (1996) theory of recombinant property, Stark and Bruszt's (1998) path dependency account of the relationship between political and economic transformation, and Eyal, Szelenyi, and Townsley's (1998) study of conversion of state power into economic power are examples of research in the legacy perspective. In such a view, politicized directorships should feature most prominently in the early period. But such directorships and any resulting impact of partisanship on business behavior should decline in the later period with the relative normalization of the economy and the polity.

The alternative perspective sees co-evolution of politics and business through a lens that focuses on changing patterns of interactions between business firms and political parties (McMenamin and Schoenman 2007; Schoenman 2005). Political and economic transformation is still important. But whereas the legacy perspective stresses path dependent effects of the starting conditions from which the new system departed, partisan competition theory pays closer attention to the institutional logics distinctive to the respective political and economic fields. Specifically, whereas the legacy perspective sees politicians as engaged in formulating programs for economic reform (Stark and Bruszt 1998) and economic actors as converting political to economic capital (Eyal et al. 1998), the alternative perspective sees politicians as attempting to win votes and business actors as attempting to win markets. That is, it regards political polarization of the economy as a function of economic and electoral competition. In this theory, the Hungarian economy is now a politically partisan economy not because it was once a politicized economy

and continues to be so, but because it evolved to a different form of politicized economy shaped by the organizational entanglement of competing political parties and their competing partisan business camps.

With the collapse of communist rule in the upheavals of late 1989, Hungarian policymakers of many stripes posited clear goals in the economic and political arenas: a market economy of competing firms and a liberal democracy of competing political parties. The means to achieve these goals were also clearly stated: separate the state from the economy and sever political ties from the field of economic action.

Although theoretical goals and practical means were clear, the challenges of market competition among firms and operation of political competition among parties actually led to establishment of ties between newly corporatized firms and newly established parties. The goal of sharply separated fields was undercut by the very logic of competition within each. On the one side, to compete in the political field, governing parties needed to manage the economy, and all political parties needed access to resources. Strong ties to firms provided these resources. On the other side, to compete in the economic field, firms built strong links to political parties to provide access to government contracts, timely information about changes in affairs of state, and opportunities to influence formulation and enforcement of government regulations. In short, to gain resources to compete for votes, parties competed for firms. At the same time and in parallel, to gain an upper hand in economic competition, firms allied with parties. Although the economic and political fields had been institutionally separated, firms and parties became organizationally entangled.

In such entanglement, Hungary is not an aberrant case. Members of the political elite in well-established democracies span political and business fields when they sit on the boards of major corporations, providing strong ties between parties and firms. For example, just weeks after stepping down as Chancellor of Germany, Gerhard Schroeder accepted an

invitation to chair the shareholders committee of Nord Stream AG, the European gas pipeline subsidiary of the Russian conglomerate Gazprom. Former Secretary of the Treasury in the Clinton administration, Robert Rubin, became Chairman of the Board of Citigroup, resigning that post in January 2009. Richard Armitage, former Deputy Secretary of State during the Bush administration, sits on the board of directors of the ConocoPhillips oil company; former Republican Senators Warren Rudman and John Sununu are on the board of directors of Boston Scientific Corporation; and Al Gore, former Democratic Vice-President of the United States, is a senior advisor at Google and a member of the board of directors of Apple Corporation.

Because rampant partisanship can be a feature of even mature capitalist democracies, our research on the Hungarian case has bearing beyond its post-socialist context. Although the existence of party–firm ties in the United States and elsewhere is well-known, to date political and economic sociologists have not explored how the structure of such ties might have economic effects. The dataset we constructed for Hungary’s political economy makes it possible to address this important research question.

In the first step of our analysis, we report findings from field interviews that open up the black box of corporate boards of directors showing how, in Hungary, firms and parties used personnel ties to coordinate strategy and channel resources. Second, we use dyadic logistic regression models to test the impact of political partisanship on patterns of business partnerships. Our findings demonstrate that director interlocks depended, to a significant extent, on party affiliations.

Third, our historical network analysis demonstrates that these patterns were not a legacy of state socialism: rather than appearing full blown from the first moments of corporate–party alliances, these structures evolved across electoral cycles. We found that in time, as privatization progressed and significance of the market in coordinating the economy increased, personal connections and

interdependencies between political parties and firms also increased. Paradoxically, dismantling of earlier state dominance in the economy produced a new kind of increasing dependence that was built on personnel ties between the political and economic fields (McMenamin and Schoenman 2007; Schoenman 2005). In the initial stages, with relatively few politicized firms, parties were regarded as just another partner for getting access to resources. As more firms acquired political affiliations, these political identities became a resource for identifying business partners. Firms that traveled in the same political circles became more likely to meet firms with similar political leanings, leading to patterns in which, for example, left-affiliated firms showed preferential attachment to other left-affiliated firms and right-affiliated firms were more likely to find other right-affiliated firms as business partners. As the political field became more polarized, divisions along party lines became fault lines in the business world. Political tagging, enforced by politicians and politicized business groupings, became so pervasive that left–right business partnerships were eschewed, leading to political fissures in the economy.

DO POLITICAL TIES SHAPE BUSINESS NETWORKS?

Our research strategy builds on and departs from recent research on the relationship between economic networks and business actors in the political or regulatory field (Burris 2001, 2005; Davis and Greve 1997; Fligstein 2008; Mizruchi 1989, 1990a, 1990b, 1992). Recent advances in this research tradition combine the network analytic perspective of economic sociology with the goal of explaining the political behavior of corporate actors. Such research demonstrates that firms tied through business links are more likely to share ties (typically operationalized as campaign contributions) to the same politicians, parties, or policy positions in the political field. That is, the structure of networks in the economy is a predictor of political position.

Recent studies of political cohesion among corporate elites, for example, demonstrate that networks of interlocking directors explain the speed of adoption of governance practices (Davis and Greve 1997) and that firms linked through interlocking directors are more likely to take similar positions on legislative matters (Mizruchi 1992). Likewise, Burris (2001, 2005) examines political behavior among top officers of 1,050 U.S. companies, operationalizing political behavior as contributions to political candidates in the 1980 elections.¹ Using quadratic assignment (QAP) regression on the 289,180 dyads of the 761 presidential contributors in his sample population, Burris (2005:249) finds that social ties through common membership on corporate boards “contribute more to similarity of political behavior than commonalities of economic interests, such as those associated with operating in the same industry or the same geographic region.”

We depart, first, from the network analytic political sociologists in how we measure political ties. Much of this work focuses on *political identification* (Neustadtl and Clawson 1988)—for example, when corporate elites identify with a particular policy position or identify with or seek to influence a politician’s views. Contributions to electoral campaigns or political action committees (PACs) are typical measures of political behavior in such research. Burris (2005), for example, is concerned with the extent to which two directors display similarity in the proportions of their contributions to the Republican or Democratic candidate in the 1980 presidential election.

We seek a stronger measure of political ties between firms and parties than campaign contributions. We therefore record a firm’s *political affiliation* when a politician occupies a position of influence in that firm, whether as a senior manager or, more typically, as a member of its board of directors or supervisory board. (In contrast to U.S. practice, Hungarian regulations on conflicts of interest do not prohibit sitting politicians from holding corporate directorships; in fact, until the mid 1990s, cabinet ministers were not prohibited

from serving as board members.) Whereas a campaign contribution opens a potential channel of communication between a firm and a politician (Clawson, Neustadt, and Scott 1992), a politicized directorship invites the politician to participate in the decision-making structure that guides the firm. It is one thing for a chief executive to contribute \$2,000 to a politician's campaign or to a corporate PAC. It is quite another thing for that executive to have a party politician sitting at the table with her board of directors.

Through appointment of a politician, moreover, a firm creates bonds with a party. An important feature of Hungarian electoral law is that candidates for Parliament do not run as individuals but rather on party lists. Politicians in Hungary are emphatically *party* politicians. They do not raise contributions for their own electoral campaigns. Appointing a politician to a corporate board solidifies a tie to his political party. Through these directors, firms can influence rule-making and gain access to timely information about government contracts, industrial and trade policies, and changes in regulatory policies and enforcement. In addition, parties gain access to firms' resources and can have a voice at the boardroom table to influence business strategy. The business director/political officeholder thus constitutes a direct link between firm and party.

If our first point of departure was methodological, our second is theoretical. Whereas political sociologists have previously studied how network ties in the economy shape similar political behavior, we examine whether and how *political affiliations shape business behavior*. By business behavior, we refer to patterns of corporate director interlocks. That is, the independent variable for political sociologists becomes our dependent variable. This transpose allows us to study how political ties have an impact on the economy.

Specifically, we are interested in whether and how partisanship migrates from the political field to constrain patterns of interlocking directorates in the economic field. Does political partisanship become a significant factor explaining the shape of business networks? If so, we

expect to see emergence of politicized business camps in the economy. At the level of the firm, such political divisions might block business partnerships that we typically see among firms not affiliated with political parties. Such blockage might result in politically induced structural holes in the business network.

In addressing typical patterns of business embedding, we build on a long tradition of research demonstrating that corporate board interlocks are consequential. Research shows that interorganizational ties through shared board members are vehicles of interorganizational power relations and capitalist class unity (Mintz and Schwartz 1985; Useem 1986). Interlocks are also important information channels (Haunschild 1998) that contribute to coordinated economic decision-making (Mintz and Schwartz 1981) and strategic alliance formation (Gulati and Westphal 1999). Ties through interlocking directorates are instrumental in securing debt financing (Mizruchi and Stearns 1988; Mizruchi, Stearns, and Marquis 2006) and contribute to coordinated political action (Burris 2005; Mizruchi 1992). In the Hungarian post-socialist context (as we show below based on our field interviews), board interlocks were crucial tools for coordinating action among strategic business allies.

To test the impact of political ties on business behavior, we adopted a historical network perspective. Fundamentally, we sought to identify trends and specify timing in the political polarization of the economy. Static snapshots at a single moment in time would yield an inadequate, perhaps even misleading, picture of the relationship between political ties and the formation of corporate interlocks. Our research design is not only continuous but also reaches back to the inception of the phenomena being investigated. Prior to the starting point of our study in 1987, there were no corporations in Hungary, no boards of directors, and no parties or politicians seeking resources to compete in competitive elections. Thus, we are able to study interactions of market-competitive firms and politically competitive parties from the first moments that they existed as such entities.

By charting the changing patterns of this interaction across an entire period of political and economic transformation, we can test competing theories about co-evolution of political and business networks in the post-socialist setting. The first perspective posits political business ties as a legacy of the transition from state socialism. Whether as a function of the conversion of state power into economic power (Eyal et al. 1998) or as a function of firms adopting practices of recombinant property (Stark 1996) in attempts to deal with the extraordinary uncertainties of the transformation, from this perspective one would expect an immediate and a dramatic explosion in the number of politicized directorships in the initial period of transition. But that initial burst would be followed by a diminution of political directorships as foreign direct investment acquires a decisive ownership stake in the economy, privatization is concluded, market institutions are firmly established, and regulatory uncertainties are normalized. Similarly, if political ties shape business ties, even to the extent of partisan blocking of ties across the left–right, such polarization should occur in the earlier stages and diminish as the economy is thoroughly marketized and electoral party competition matures.

The alternative perspective sees politicized directorships not as path dependent effects (Stark 1996; Stark and Bruszt 1998) of the legacy of the transition but, instead, as a function of the development of electoral party competition. In this view, politicized directorships should continue to grow after the initial transition stage and should not diminish with the consolidation of foreign capital, market regulations, and democratic competition. Similarly, if partisanship leads to politicized business camps that eschew ties across party affiliation lines, partisanship should increase rather than decrease in intensity as party competition intensifies.

Moreover, in this partisan competition theory, politicized directorships should be punctuated by rhythms of electoral competition. Political competition unfolds on a different time frame than market competition. Although publicly traded firms face quarterly

and annual reporting requirements, political parties face the certainty of elections—with uncertain outcomes. Firms might produce long-range plans, but their time horizons are not synchronized throughout the entire economy. Political competition, by contrast, is synchronized. The rhythm of elections leads to intense campaigns in which parties mobilize their camps. Because our dataset includes the entire epoch of transformation, including three parliamentary elections, we can test whether winning or losing an election has consequences for party–firm alliances.²

As we shall see, the findings of our analysis of Hungary are clearly in line with the partisan competition perspective. Our findings indicate that political polarization of the economy cannot be explained as the conversion of state power into economic power (Eyal et al. 1998) or as a path dependent holdover from the transition period (Stark and Bruszt 1998), but should be understood as a form of political capitalism marked by the dynamics of interactions between firms and political parties. Our analysis indicates that the periodicity of electoral victories and defeats in Hungary led to an intensified polarization of the economy in which competition for votes became competition for firms.

DATA AND METHODS

To gain an understanding of operations of corporate boards in Hungary and the role of the political officeholder/director within them, we interviewed 24 CEOs (selecting across a range of industrial branches, locating actors who played important roles in the earlier period as well as those on the contemporary scene, and finding directors of companies owned by multinationals as well as domestically controlled firms), politicians across political camps, former government officials (including two former Finance Ministers and two former heads of the Central Bank), and journalists who covered party financing and corporate governance. The typical interview lasted two hours; in almost every case we developed good rapport with our interviewees, resulting in remarkably candid conversations.

To conduct historical network analysis of field-spanning and field-specific ties, we assembled a large dataset. On the business side, data include the complete list of economic officeholders and complete ownership histories of the largest firms in Hungary during the period from 1987 to 2001. We defined a *large* firm as ranking among the top-500 firms (based on revenue) in any year from 1987 to 2001. Our inclusion rule resulted in a population of 1,843 firms. Out of the 1,843 firms, 147 ownership files were unavailable or contained little or no information on ownership. Our final dataset contained the full managerial and ownership histories of 1,696 firms. For a small country like Hungary, this population of firms accounted for more than half of all employment, two-thirds of the GDP, and the overwhelming proportion of export revenues (Figyelő 2002).

For each firm in our population, we gathered from the 20 Courts of Registry the names of all *economic officeholders*, which we defined as all senior managers (e.g., CEOs, CFOs, and the like whose signatures were legally binding on the firm), all members of its board of directors, and all members of its supervisory board for the entire length of the firm's existence (with 1987 as the earliest starting point). The resulting dataset of economic officeholders from 1987 to 2001 contained 72,766 names.³ For each economic officeholder, we recorded tenure in office as the month and year of accession to office and month and year of exit.

To augment these personnel records, we also gathered complete ownership histories of these 1,696 firms by recording, for each year from 1987 to 2001, the following data: equity in thousand Hungarian forints, names of a firm's top-25 owners (according to their ownership stake), and the percentage stake that each owner held in the company. We coded types of owners into four categories: state, Hungarian firm, Hungarian person, and foreign owner. For each firm in our population, we also collected data on its annual revenues, industrial classification (SIC code), location, privatization history, and increase or decrease

in capitalization, as well as information on the date the firm was founded and the date of filing for bankruptcy, liquidation, or cessation for any reason, that is, the date the firm's file closed at the registry court.

On the political side, we defined *political officeholders* as all elected national and local officials, including all Members of Parliament (MPs), all local mayors, and all national-level government officials, including the Prime Minister, all cabinet ministers, and their politically appointed deputies. For years prior to 1990, we included government ministers, deputies, and members of the Communist Party's Politburo and Central Committee. For the entire period examined, 1987 to 2001, we gathered names of all political officeholders and recorded their party affiliations and any changes in such.

We collected data on political and government officeholders from the National Bureau of Elections (which holds records on all elected political officeholders) and the Hungarian News Agency (which maintains records on all government officials entering or exiting office). For the period prior to free elections, we defined political officeholders as all members of the Politburo and the Central Committee of the Hungarian Socialist Workers Party, as well as government ministers and their deputies.⁴ We gathered names of political officeholders from 1987 to 1989 from a comprehensive CD-ROM publication (Nyíró and Szakadát 1993) covering the political elite under state socialism. As with economic officeholders, we recorded tenure in office using a monthly time frame. The resulting dataset of political officeholders included 16,919 names.

For any given year, we counted all active and former officeholders as politicians. We asked interviewees whether it mattered that the appointment was to a current or an ex-politician. The reply, with muted laughter at our naiveté: "In Hungary, there is no such thing as an *ex*-politician."⁵ We used politicians' party affiliation to code whether they belonged to the left or right political camps. Hungary has a multiparty system; but, in

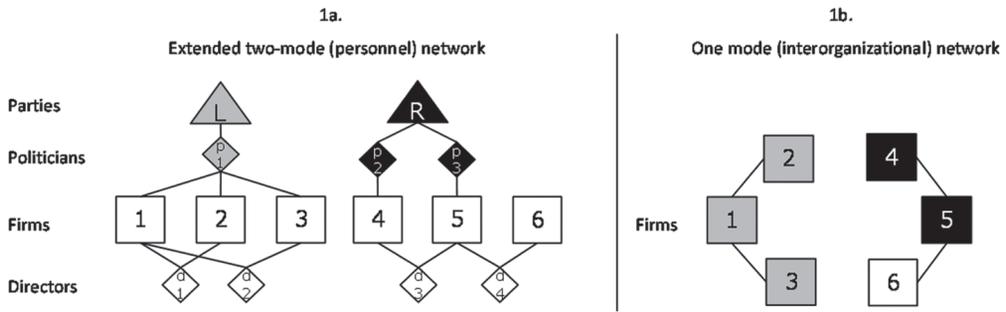


Figure 1. Extended Two-Mode Network and One-Mode Interorganizational Network

effect, it is dichotomous. Each parliamentary election produced a majority party and a large oppositional party. Smaller parties (who clearly allied with the left or the right) had relatively few parliamentary seats and even fewer board memberships. Considering board seats occupied by politicians, in any given year, on average, 89.3 percent of these seats were occupied by the two main parties. We classified as left former communist party officeholders, those with the successor socialist party, and their coalition partner, the Free Democrats' Alliance. The MDF, FIDESZ after 1996, Smallholders Party, MIEP, and KDNP were classified as right.

By merging the economic and political officeholders datasets we could precisely identify (for any given firm in any given month) whether a company had an economic officeholder who was also a political officeholder and identify that officeholder's party label. We recorded a firm as *neutral* if it had no political affiliation in a given period. We labeled firms with a left- or right-camp politician on its board as *left-* or *right-*affiliated. We labeled firms as *balanced* if they featured both left- and right-camp politicians on their board at the same time. Our interviews suggest that one politician was enough to indicate a political affiliation and that a board having at least one politician from each camp was seen as flying the banners of two political leanings.

We counted two firms as having a business tie of a *director interlock* when they shared at least one board member who was not a politician. Figure 1 illustrates how we constructed the interorganizational network out of our

lists of personnel. Firm 1 has a director interlock with Firm 2 through its shared director d1. In the same way, we established business network ties between Firm 1 and Firm 3, Firm 4 and Firm 5, and Firm 5 and Firm 6. Politician p1 sits on the boards of Firms 1, 2, and 3, which are therefore assigned left-party affiliations, with p2 making the right-party affiliation for Firm 4 and p3 making the right-party affiliation for Firm 5.

Because we are interested in testing the impact of political affiliations on business ties, we opted for a conservative coding scheme that does not count director interlocks where a politician acted as the personnel tie linking businesses. Such ties would automatically contribute to political homophily and the separation of political camps. Figure 1 shows, accordingly, that Firms 2 and 3 are not categorized as having a business tie.

To test expectations about the impact of political affiliations on business partnerships, we adopted a dyadic approach. Dyadic data shifts attention from firms to ties between firms. For any given year, we constructed datasets with pairs of firms as units of analysis. For each of these dyads, we recorded the presence or absence of a business partnership (our dependent variable). This variable equaled zero if there was no personnel tie between two firms, and it equaled one when such a tie was present.

We used logistic regression models (using the 64-bit R statistical package) with dyads as units of analysis. The dependent variable measured the presence of a personnel tie between two firms. This is a customary approach in

social network analysis, where presence of a given tie is the dependent variable. Earlier logit models in the P^* framework adopted a fixed-effects approach by including expansiveness (number of ties) parameters for each node (Anderson, Wasserman, and Crouch 1999; Wasserman and Pattison 1996). These models were revised in subsequent applications for larger networks, as researchers recognized that inclusion of hundreds, possibly thousands, of variables for this purpose is cumbersome and impractical (Moody 2001). Thus, the current approach to address unit specific heterogeneity is to include controls for the expansiveness of nodes involved in the dyad, and not all nodes (Keister and Cornwell 2009; Quillian and Campbell 2003). This is the approach we adopted. The variable we included to capture unit specific heterogeneity in network embeddedness was “degree of $i \times$ degree of j .” We constructed separate logit models for each year in our period, following Padgett and McLean’s (2006) modeling strategy. Our independent variables also referred to pairs of firms, to conform to the dyadic nature of our dependent variable. We used two sets of independent variables: the first set represented political affiliations and the second set represented business criteria.

Our first set of independent variables capturing political affiliation were based on four categories (i.e., neutral, left, right, and balanced). Our dyadic variables of political affiliation recorded combinations in the dyad: both firms could be politically neutral, in that case our neutral–neutral variable equaled one (our reference category). Similarly, both firms could be affiliated with the left, in that case our left–left variable equaled one. We coded shared affiliation with right parties (right–right) and a shared balanced affiliation (balanced–balanced) the same way. When one firm was affiliated with the left and the other with the right, our left–right variable equaled one. We coded our left–balanced and right–balanced variables the same way. When one firm was neutral and the other was right, left, or balanced, we recorded the dyad as neutral–political.

We expect to document emergence of politicized business groups. At the dyadic level, dyads with shared political affiliations

will be more likely to share a director interlock than will a dyad with two politically neutral firms. We further expect that dyads with a left-affiliated firm and a right-affiliated firm will be less likely to share a director.

Because political affiliation might be correlated with firm attributes that are themselves strong predictors of business-to-business ties, our models controlled for standard industrial and financial criteria. It could be the case, for example, that firms in heavy industry had ties of director interlocks with each other while also having ties to parties on the left. Similarly, firms in agriculture might share ties and right-camp affiliations. In these cases, a finding of political homophily (in left–left and right–right dyads) might better be explained by common industrial sector; and antipathy across political camps (in the case of left–right dyads) might actually be due to the absence of cross-sectoral director interlocks. Size, position in local network structures, and ownership structure (i.e., companies in state ownership or foreign-owned companies) might similarly co-vary with party affiliation.

To control for such effects, our second set of independent variables recorded size, industry, ownership, and local network topography. We recorded capital size in the dyad, both as the product of the capital sizes of firms in the dyad and as the capital size difference in the dyad (Ingram, Robinson, and Busch 2005). We expect that larger firms will be more likely to build ties in general. We also expect that ties will form between firms with a larger capital difference because most business groups tend to have a larger central firm linked to smaller firms around it (see Stark and Vedres 2006; Vedres and Stark 2010).

In our dyadic model we also included a variable indicating a shared industry affiliation. We expect that industry is a key category behind the choice of network partners, because firms tend to connect to others in the same industry.

To analyze how ownership relations of firms in a dyad affect business networking, we constructed a set of ownership variables. Designating a firm by one form of ownership alone would ignore that many firms in our

population had several different types of significant owners. For example, a firm could have significant ties to state owners while also having significant ties to foreign owners. For each firm, we thus recorded the presence of significant owners of the following types: state ownership, foreign ownership, domestic corporate ownership,⁶ and domestic individual ownership (the reference category). To determine significant owners we used cluster analysis (see Appendix for details).

We constructed our ownership variables at the dyadic level. The first variable recorded whether both firms in the dyad had (in a given year) significant state ownership. The second recorded whether one but not both had significant state ownership. The third variable recorded whether both firms in the dyad had significant foreign ownership, and so on for domestic corporate ownership and domestic individual ownership (i.e., the reference category). Constructing the variables in this way allowed us to test whether shared affiliations to the same type of owners (i.e., state, foreign, or domestic corporate) led to the formation of directorship ties. We could also test whether ties were avoided in dyads with different ownership affiliations.

We recorded the triadic shape of ties around the dyad as a further set of control variables. First, ties were more likely between firms that already had many ties. We thus included a variable that recorded the degree of i multiplied by the degree of j . Second, because interlocks in Hungary were used in assembling business groups (Vedres and Stark 2010), we expect triadic closure to be a significant mechanism for creating ties. Ties were more likely between two firms that were already connected to a number of common third firms. We thus included a variable that recorded the number of third firms that i and j were both connected to.

FIRM-PARTY TIES AS STRATEGIC ASSETS

During the early 1990s, the Hungarian economy underwent a rapid and profound transformation:

firms were privatized, regulations were rewritten in every policy domain (from taxation to tariffs, from accounting to corporate governance, and from banking to labor law), old external markets to the East collapsed, and new ones to the West had to be established. Amid these uncertainties, corporate boards were an important new institution on the organizational landscape, and managers recognized the potential of board ties to provide reliable sources of information, access to insider knowledge of successes and failures elsewhere in coping with challenges, and a mechanism for coordinating actions among strategic business allies.

Required by corporate law, the institution was entirely novel to Hungarian executives. CEOs and other senior managers whom we interviewed recalled their puzzlement on attending their first board meeting:

I had no experience as a board member. But practically that was the case for everyone all across the country. There was no pool of people who had experience. For all of us it was on-the-job training. (professional outside director who now sits on numerous boards)

But interviewees also emphasized how quickly firms grasped the possibility of sharing directors as an opportunity for coordinating strategy:

Nobody knew what a board of directors was. We'd never, none of us, ever been in a board of directors meeting. Management didn't know either. But they quickly figured out that there were opportunities to exploit. (bank director)

Q. How are boards of directors important?

A. It was necessary to have board interlocks in order to work out the problems. My predecessor here was only the CEO and without any board interlocks he didn't have a chance. (CEO of a major manufacturing holding company)

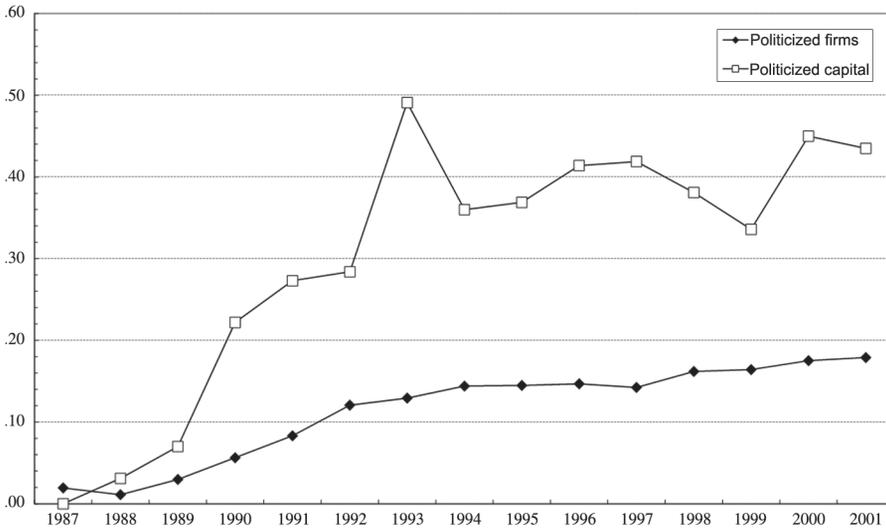


Figure 2. Proportion of Firms and Capitalization with a Political Director

Note: Politicized firms records the proportion of firms with a political affiliation. Politicized capital records the proportion of capitalization in politically affiliated firms.

When we asked what politicians do when they are members of a board, one director, who sat on several boards in the manufacturing sector, gave the following blunt reply:

Q. What can a political board member do?

A. Use relations.

Q. Yes . . . ?

A. Lobbying. Business lobbying and political lobbying.

Our interviews showed that firms and parties alike regarded the politician/director as a strategic asset. Not limited to the tumultuous years of the initial period, the asset's importance gained in significance as the number of firms with a political valence and their weight in the economy grew over time.

Drawn from our dataset, Figure 2 shows that the proportion of firms affiliated with political parties was small at the outset, grew quickly until about 1994, and continued to increase through 2001. Although the proportion of firms with a political valence never exceeded 17 percent, the importance of these

firms in the Hungarian economy is better captured by weighting firms according to their capitalization. When taking levels of capitalization into account, as Figure 2 also shows, the segment of the Hungarian economy with a political leaning grows to almost 50 percent by 1994 and hovers with some variation around 40 percent throughout the remaining period.

During the early 1990s, privatization of state-owned companies was one of the major issues of contention in the Hungarian economy. Acquisition of these companies was highly politicized, as was access to bank credit during a severe banking crisis. It was in these "battles," as one experienced senior manager expressed it, that strong political ties between firms and parties were forged:

Ownership was born in and based on political ties because of privatization. The state held property and who would get that property was a political fight. Each party developed its own friendly, entrepreneurial court around them for privatization and for business in general. Access to credit was highly politicized whether it was direct actions by whichever governing party or by the banks that were close to them. There

were battles for contracts. And the parties used all these kinds of battles as opportunities for donations. (former head of the Central Bank, now CEO of a major construction holding)

CEOs repeatedly told us that getting out of the system of political ties was not an option. Politics and politicians pervaded the economy. In the following passage, we see how a CEO read signals sent by the composition of boards, how he interpreted the presence of a politician on a board, and how parties' demands for resources as a routine part of business life were met through means other than cash payments:

Q. What if you see a known person, for example, a politician sitting on a board?

A. Then I know some arrangement has been made or will be made.

Q. A personal arrangement? Somebody wants to help a friend whose daughter is getting married . . . ?

A. I've heard of that. I don't believe it. Politicians are not there because of friendship. There's always a function.

Q. So, what does it mean if I see an ex-politician on a . . .

A. [Interrupts] Whoaaaa. There are no *ex*-[emphasis] politicians. There are politicians and there are businessmen. A politician who is not in office is still a politician.

Q. OK. I see a politician on a board. What do parties want from companies?

A. Money. What else?

Q. How do they get it?

A. There are lots of channels to get money to a party through normal business transactions. There are consulting firms, marketing

companies, advertising agencies. You make a contract with them. But you only pay and get no service.

Q. What about contributions to party foundations?

A. That's too brutal. The other means are more discrete. It's your risk not to enter into business with them. You have to formulate what you need from a party. But it's frequently difficult to price.

Q. Do parties approach companies?

A. Yes. Sometimes a politician will be direct. But the more common practice is indirect. You're approached by another businessman. Someone who is close to a party. Sometimes they'll ask for cash. Sometimes they'll say, "What do you need?" (CEO of a major holding company)

From political parties' viewpoint, nomination of politicians to corporate boards is so important that it must be managed systematically. In our interviews we learned that a considerable part of the work of directors of party finance was coordinating such corporate directorships. In party-firm negotiations, parties frequently nominated a list of their politicians as candidates for directorship appointments.

Following these negotiations, firms appointed political officeholders to their boards of directors, compensating them quite handsomely in many cases as well as providing other resources (e.g., cars, drivers, and clerical and other support staff). Politically motivated corporate directorships thus provided parties with a means to build a loyal cadre. Directorship compensations could reward sitting politicians; and corporate appointments could provide a cushion to politicians who left office after their party list did not fare well in a given election, thereby boosting morale among party loyalists who would be available to run again at the next electoral opportunity.

Although it was rare for firms to openly make *financial* contributions to political parties, our interviewees confirmed political reportage (Juhasz 2001) that firms frequently made *in kind* contributions to parties. In such cases, for example, part of an advertising campaign for a political party was covered as part of an enterprise's advertising budget; consultancy, data processing, information technology, and other charges that appeared in a company's accounts were actually performed for a political party; and a leading politician (even a Prime Minister) might have found his expensive lawyers' fees for a legal suit in which he was mired being covered as part of a prominent corporation's legal expenses. These and other arrangements were facilitated by the appointment of politicians to corporate boards.

By the time we conducted our interviews in 2005, the Hungarian economy had completed the transformation to a market economy. But despite institutionalization of electoral democracy, an unprecedented influx of foreign capital, and integration into the European Union (EU), many of the senior executives with whom we spoke complained of the economy's political polarization. Although the phenomenon of a polarized political field is well-known, the notion that *the economy* might be politically polarized is likely unfamiliar to many. By political polarization, these senior managers referred to the problem that the economy was divided into political camps.

A repeated theme of these conversations—as we see in the following statements—was that many large firms were assumed to have a distinctive affiliation with either the left or the right of the political divide. Referring to the left and right in Hungary, one senior executive stated with a combination of emphasis and regret: “Corporate boards are definitely political. It's easy to recognize who is red and who is orange.” To our general question, “What's the significance of political ties in the economy?” the manager of a large manufacturing firm in electronics bemoaned: “It depends on the industry. In our industry it is the unavoidable dark side.”

EFFECTS OF PARTISANSHIP ON BUSINESS TIES

To test effects of business-to-party alliances on business-to-business ties, we adopted a dyadic approach (Padgett and McLean 2006). Units of analysis are pairs of firms, and the dependent variable is presence or absence of a business tie between the dyad. First, we constructed separate logistic regression models for each year. Then, to test the statistical significance of trends in the politicization of business ties, we constructed a pooled model as well. Table 1 presents findings from the separate logistic regression models.

Findings from these models indicate that political affiliations significantly predict business ties in the Hungarian setting. In general terms, politicization of business ties increased throughout the period such that, in the final three years, all of the political variables were significant.

Within this overall trend, political homophily among pairs of left–left and right–right affiliated firms was a strong and always positive factor predicting business ties. Across the period, we found that firms sharing a left political leaning were more likely (than the reference category, neutral–neutral) to connect to each other through an interlocking director. Political homophily of the right–right variant was also pronounced. Except for 1990 when there were only a handful of right-affiliated firms, this variable was significant throughout the period. Given that there were no parties on the political right prior to 1989, it is notable that firms with a right political affiliation found each other as business partners quite early in the process and continued to show preferential attachment.

Comparing our findings about homogeneous left–left and right–right pairings with heterogeneous left–right pairings, we see that whereas firms of the same political leaning showed a marked homophily, pairs of firms with opposite political leaning exhibited a growing antipathy. Coefficients in Table 1 indicate that this trend started in the mid-90s and became more pronounced over the last

Table 1. Logistic Regression Models of Dyadic Connectedness by Year

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
<i>Political Affiliation</i>												
Neutral-political	.513**	.278**	.271**	.137	.107	.180**	.223**	.281**	.253**	.261**	.258**	.276**
Left-left	1.175**	1.134**	1.524**	1.123**	1.114**	.800**	.834**	1.004**	1.510**	1.440**	1.419**	1.451**
Right-right	-4.564	1.577**	1.185**	1.133**	1.141**	1.351**	1.760**	1.688**	1.377**	.896**	.866**	1.135**
Left-right	.216	-.005	-.376	-.267	.195	-.298	-.285	-.414	-.277	-.575*	-.1.153**	-.1.251**
Balanced-balanced	1.002	-7.710	1.913**	1.793*	.513	1.021*	1.220**	1.379**	.977**	.880**	.906**	.858**
Left-balanced	-.247	.619	.190	.482	-.600*	.277	.407*	.562*	.655**	.725**	.826**	.726**
Right-balanced	-1.174	-.091	1.089**	.356	.480*	.576*	.337	.651*	.346	.623**	.889**	.977**
<i>Controls</i>												
<i>Ownership</i>												
Both with state ownership	.250	.186	.102	.223*	.379**	.506**	.387**	.343**	.666**	.861**	.689**	.885**
One with state ownership	-.004	.031	-.251**	-.208**	.008	.182*	-.044	.030	.070	.007	-.124	-.132
Both with foreign ownership	-.118	-.058	.161	.185	.241*	.286*	.271*	.307**	.370**	.491**	.423**	.376**
One with foreign ownership	.053	-.336**	-.304**	-.269**	-.256**	-.165*	-.248**	-.053	-.041	-.001	-.108	-.047
Both with domestic firm ownership	.490*	.360*	-.106	.025	.104	.131	.041	.176	.220*	.223*	.093	.095
One with domestic firm ownership	.254	.009	.004	.033	-.003	.016	-.123	.007	-.022	.056	-.027	-.054
<i>Capital size</i>												
Size of $i \times$ size of j	.006*	.004*	.004**	.005**	.007**	.006**	.024	.006**	.004**	.005**	.004**	.004**
Absolute size difference	.075	.005	-.000	-.009	.027	-.011	-.046**	.002	.000	-.023	.005	-.014
<i>Local topography</i>												
Degree of $i \times$ degree of j	.010**	.002	-.000	.001	.000	-.000	-.002**	-.003**	-.002**	-.003**	-.002**	-.001**
Closed triad	2.442**	2.307**	2.672**	2.927**	2.760**	2.776*	2.784**	2.795**	2.861**	2.790**	2.961**	3.004**
<i>Industry</i>												
Same industry	.430**	.654**	.629**	.628**	.631**	.750**	.709**	.745**	.802**	.764**	.728**	.733**
Constant	-6.375**	-6.187**	-6.316**	-6.622**	-6.951**	-7.070**	-6.784**	-7.027**	-7.002**	-7.083**	-6.893**	-6.924**
<i>Model Fit</i>												
N	24,532	101,927	214,841	336,611	381,502	387,641	412,687	435,711	440,392	435,712	426,427	416,329
-2LL	742.9	2279.4	4431.9	6242.9	6998.0	7015.9	7837.0	8179.2	8327.9	7446.7	7214.1	7113.3
R^2	.251	.284	.335	.351	.353	.350	.368	.377	.377	.349	.356	.360
Percent correctly classified	98.9	99.4	99.6	99.6	99.6	99.6	99.6	99.7	99.7	99.7	99.7	99.7
χ^2 (df)	749.3(18)	2184.6(18)	3671.1(18)	5194.9(18)	5664.3(18)	5954.8(18)	6713.4(18)	7056.9(18)	7292.3(18)	6937.3(18)	6365.7(18)	6214.8(18)
P -value	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

* $p < .05$; ** $p < .01$ (two-tailed tests).

three years in our study. That is, it became less and less likely that a firm with a left affiliation would establish a business network tie to a firm with a right political affiliation. Such antipathy did not spring full blown during the immediate aftermath of the political transition, but instead developed and intensified across the period of left–right party competition. Taken together, our findings of an always positive in-group homophily and a growing out-group antipathy suggest an increasingly polarized economy divided into political business camps.

Our findings about the influence of political affiliations on business ties are not artifacts of other firm attributes. Although many of the business criteria variables are predictors of business ties, variables of political party affiliation presented here were statistically significant net of these effects.

As expected, business ties were more likely among large firms. Also as expected, business ties were significantly more likely where pairs of firms operated in the same industry. To test the sensitivity of our findings on political affiliation, we ran expanded versions of our models with all possible pairings of industry categories (e.g., financial–heavy industry, financial–services, energy–heavy industry, and so on). Particular cross-industry pairings did make ties more likely (especially when one or both firms in the pair were in finance, service, or trade), but the political variables in these expanded models did not change. Outputs of these models are available from the authors upon request.

Coefficients recording the product of the degree in the dyad were significantly negative in the later years of the period, indicating that firms with higher degree centrality tended not to connect to each other. This disassortative mixing (Newman 2002) did not eliminate the significance of the left–right antipathy. Triadic closure was significant in all years. This process of cohesive group formation did not eliminate our findings of political homophily within party camps.

Table 1 also indicates that firms' relations to their owners shaped their choice of business partners. Firms with similar types of

owners—whether state or foreign—tended to have business ties with each other. Such homophily became more prevalent in the latter half of the period studied. Pairings involving differences in ownership did not exhibit preferential attachment; in fact, in some periods, ownership differences obstructed creation of network ties. Firms with considerable foreign ownership were significantly less likely to be connected to domestically owned firms in the early half of the period studied when foreign ownership was exceptional rather than prevalent. This negative correlation diminished later on, suggesting that foreign-owned firms became more integrated into the broader Hungarian economy.

To test the statistical significance of politicized trends, we constructed a pooled logistic regression model, pooling dyads from all years, resulting in a dataset with more than four million observations. The dependent variable for this model was the same as in the repeated cross-section logistic regression models: the presence or absence of a business tie between two firms. The independent variables were also the same, with the addition of a time trend, and interactions of the time trend with combinations of political affiliation. The size of the dataset did not allow us to control for dyad-specific heterogeneity.⁷ Table 2 presents results of this pooled model. The model supports increasing left–right antipathy: the coefficient for the interaction of the time trend and left–right political combination was negative and statistically significant.

EVOLUTION OF POLITICAL BUSINESS CAMPS

To understand evolution of politicized business camps, we examined changing fortunes of political parties across election cycles. Figure 3 shows that election outcomes had consequences for relationships between parties and firms. Dashed vertical lines in Figure 3 delineate dates of the 1990, 1994, and 1998 elections in which incumbents were defeated and challengers triumphed. After each election, political victors increased the number of their affiliated firms. The increase was most dramatic for the

Table 2. Pooled Logistic Regression Models of Dyadic Connectedness

	Model 1			Model 2		
	B	Exp(B)	<i>p</i>	B	Exp(B)	<i>p</i>
Year				-.029	.971	.000
<i>Political Affiliation</i>						
Neutral-political	.228	1.256	.000	.218	1.243	.000
Left-left	1.144	3.139	.000	.835	2.304	.000
Right-right	1.220	3.387	.000	1.249	3.486	.000
Left-right	-.414	.661	.000	.316	1.372	.148
Balanced-balanced	.970	2.638	.000	1.375	3.955	.000
Left-balanced	.466	1.594	.000	-.065	.937	.763
Right-balanced	.653	1.921	.000	.569	1.766	.010
<i>Interaction terms</i>						
Year x Neutral-political				.003	1.003	.658
Year x Left-left				.043	1.044	.040
Year x Right-right				-.004	.996	.848
Year x Left-right				-.102	.903	.001
Year x Balanced-balanced				-.042	.959	.320
Year x Left-balanced				.070	1.073	.005
Year x Right-balanced				.015	1.015	.572
<i>Controls</i>						
<i>Ownership</i>						
Both with state ownership	.456	1.578	.000	.392	1.479	.000
One with state ownership	-.009	.991	.656	-.045	.956	.039
Both with foreign ownership	.283	1.327	.000	.287	1.332	.000
One with foreign ownership	-.155	.856	.000	-.152	.859	.000
Both with domestic firm ownership	.172	1.188	.000	.158	1.171	.000
One with domestic firm ownership	.016	1.016	.447	.010	1.010	.656
<i>Capital size</i>						
Size of <i>i</i> × size of <i>j</i>	.006	1.006	.000	.006	1.006	.000
Absolute size difference	.013	1.013	.011	.012	1.012	.020
<i>Local topography</i>						
Degree of <i>i</i> × degree of <i>j</i>	-.002	.998	.000	-.002	.998	.000
Closed triad	2.801	16.461	.000	2.802	16.471	.000
<i>Industry</i>						
Same industry	.711	2.036	.000	.711	2.035	.000
Constant	-6.923	.001		-6.675	.001	.000
<i>N</i>		4,014,312			4,014,312	
-2LL		73474.01			73565.45	
<i>R</i> ²		.352			.352	
Percent correctly classified		99.5			99.5	
χ^2 (df)		63829 (18)			63764 (26)	
<i>P</i> -value		.000			.000	

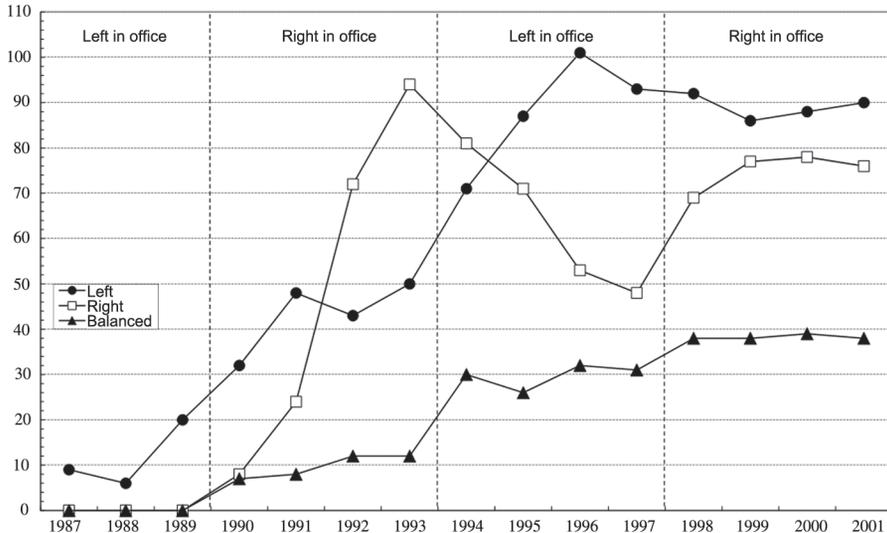


Figure 3. Number of Firms by Political Affiliation

Note: The vertical axis shows number of firms. Dashed vertical lines separate election terms, with the winning party indicated at the top.

center-right coalition that won the 1990 election and presided over the first freely elected government from 1990 to 1994. As Figure 3 indicates, the number of firms with a right political affiliation grew from effectively zero to more than 90 during these four years in power. The socialists, too, capitalized on political success by increasing the size of their business base after winning the 1994 elections. In the last year in which they were out of office, 1993, they had left-oriented politicians on the boards of 50 firms. After coming to power, this number doubled to 100 firms by 1996. A new right coalition then won the 1998 election, with the effect of increasing its business base from about 50 to almost 80 firms.

In addition to indicating that winning parties succeeded at winning firms, Figure 3 also shows an important trend. Across the three periods of alternating rule, we see that governing parties faced increasing difficulty in expanding their firm base while in office. Governing parties did increase their firm base, but the numbers of newly affiliated firms show a clearly declining trend: 88 in the first period (1989 to 1993), 50 in the second (1993 to 1997), and 30 in the third (1997 to 2001). These numbers suggest increasing political

competition over what became a more or less stabilized level of politicized firms.

Following their victory in the first democratic parliamentary election in 1990, the center-right parties led by the Hungarian Democratic Forum (MDF) had considerable ground to make up. The socialists already had a business base in the old state-owned firms. Some of these firms began converting to the newly recognized corporate form (among other legal requirements, establishing boards of directors) even before the system change. By 1989, left politicians were sitting on the boards of 20 such companies. Once in power, the right moved quickly and decisively. At the helm of various state property and privatization agencies, MDF officials made sure their politicians were appointed to the boards of newly privatized companies as well as newly corporatized firms that remained in state ownership. By 1992, after just two years in office, the right could already claim more firms than the left, and they pulled ahead still further in 1993. This they achieved, on the one hand, by temporarily slowing growth in the number of socialist firms and, more significantly on the other hand, by aggressively increasing the number of firms in which they placed their own politicians. Many

observers believed the new governing party had gained a hold on the economy and was consolidating these ties for the long run.

A key turning point came in 1994. The reconstructed socialist party, which had gained only 10 percent of parliamentary seats in the 1990 election, now achieved an overwhelming electoral victory. And it immediately began to translate success in the electoral arena into success in the field of firm affiliations. As Figure 3 shows, within three years the socialist party more than doubled the number of firms in its political business camp. Moreover, these gains were directly at the expense of the right parties. That is, whereas during the earlier period when the center-right government was in office (1990 to 1993) and left-affiliated firms continued to grow, during this second period when the left was the governing party (1994 to 1997), right parties saw their numbers of affiliated firms sharply decline.

Business managers realized that alliances with political parties were a crucial resource. They later became aware that with alliances came political connections. As more and more boards acquired a political leaning and their respective networks solidified, CEOs and directors of boards began to sense that their companies' political affiliations were politically tagging their companies. A former government minister and current CEO of a major auditing firm expressed this succinctly:

Sooner or later everyone gets a political tag. It's less and less that you can convince others and convince the market that you are neutral. Even just keeping your position can mean that you are with my enemies.

He went on to argue that political tagging is not about political beliefs but about location in a network:

It's not that this or that member or this or that board has a policy preference, but that they are closer to these people and not those. It's not like political beliefs but instead more like camps relying on different networks. (former government minister and current CEO of a major auditing firm)

Campaign expenditures escalated in election years, although parties' legally available campaign budgets changed little. There is no reliable data about actual campaign expenditures, but it is estimated that by the 1998 election, parties spent three to four times the amount they could secure legally. Most of these expenses came through informal channels from trusted businesses (Juhász 2001).

During this period, politicians and business leaders alike became acutely aware that Hungarian political parties were not only in competition for votes, they were also in competition for firms. Just as party whips in Parliament attempt to enforce party discipline, now parties were attempting to enforce discipline on their firms in the economic field. This is directly reflected in our logistic regression findings: by 1999, the coefficient predicting business ties among antipathetic left-right pairings became significantly negative.

For a graphic representation of these statistical relationships, Figure 4 charts coefficients from Table 1. Lines Left-Left and Right-Right show coefficients of homophily within the left and right political camps, respectively. Line Left-Right shows coefficients of antipathy across a growing left-right divide. This trend is negative throughout the epoch, periodically broken by election years. The coefficient of antipathy was somewhat mitigated after each election when political directorships were realigned as politicians from winning parties were newly placed on boards. When a company changed its political leaning, a shake-out of a directorship tie with the former political camp would not take place immediately following the election but awaited a decision to sever the tie.

Figure 4 also shows that homophily markedly increased in the political camp whose party lost an election and decreased for the winning camp. As we saw in Figure 3, winning parties were able to increase the number of firms in which they held directorships. These greater numbers show less density in their business ties. Conversely, the smaller number of firms in the camp of the losing party is denser. The negative association between size and density is a general property of networks.

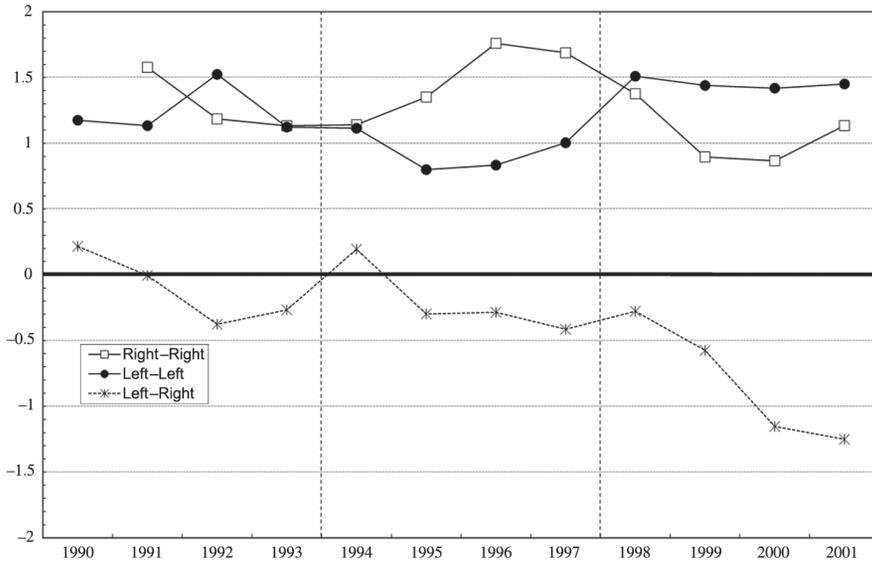


Figure 4. Logistic Regression Coefficients of Political Leanings

Our findings suggest that politicization of business ties was the product of electoral political competition rather than a simple legacy of state socialism. First, politicization of the economy cannot be attributed solely to conversion of communist cadre positions into a new business elite (Eyal et al. 1998). Although our study confirms prior research (Borocz and Rona-Tas 1995) that this former elite remained a significant network resource, our findings go beyond that earlier work, demonstrating, with longitudinal data, that the new political elite of the conservative camp followed a similar trajectory. As we saw, conservative parties of the MDF and later the FIDESZ moved forcefully to place their politicians on corporate boards while they were in government and persisted as best they could to maintain those ties when they were in opposition. Second, political ties among firms and parties, whether of the left or the right, did not immediately constitute a politically polarized economy. As we saw, left-right antipathy in the business network did not spring full blown out of the ruins of communism, but emerged only after the second democratic election and was further exacerbated after the third election. Hungary's politically polarized economy was not a legacy of the post-socialist transition, but a new feature born

in and reproduced by the operations of a capitalist market economy and a democratic competitive polity.

CONCLUSIONS

Institutional separation of state and economy is a core feature of modern capitalism. As relatively autonomous fields, each is governed by different institutional principles. Whereas the relevant capital of a political party and its leaders is measured by success in winning the electorate's votes, that of a corporation and its leaders is measured by success in winning markets and securing profits. Political parties compete for votes; firms compete for profits.

Competition among political parties, however, is structured in such a way that a gain in the percentage of votes for your party is a loss for mine. Accordingly, whereas businesses regard others in their field as *competitors*, political parties regard each other as *opponents* (and, not infrequently, the tag "loyal opposition" is a euphemism for "enemy"). Although it can vary in its intensity, partisanship is a key feature of party politics. At times, political leaders can rise above partisanship when they attempt to construct political coalitions or secure support for legislative agendas. But at

other times, partisanship rages fiercely—so much so that it overrides policy choices that are demonstrably for the public good.

Although the fields of party competition and business competition are institutionally separated, their boundaries are crossed by field-spanning ties. In this study, we examined a strong version of such cross-field linkages: the field-spanning ties that occur when members of the political elite sit on corporate boards. Our task has been to analyze whether and how the structure of business-to-party alliances has consequences for the shape of business-to-business networks. Stated in the language of field theory, we examined how field-spanning ties could have effects on field-specific ties of interlocking directors. As firms reach into the field of political parties, does political partisanship reach into the field of business?

If choice of business network ties is governed only by business criteria, firms should be indifferent to their strategic partners' political affiliations. On the basis of our field interviews and our dyadic logistic regression models, we demonstrated that Hungarian companies were far from indifferent to political affiliations. When a member of the political elite sat on a board of directors, that corporation did not literally fly the party flag; but, as we saw, it was politically tagged. Most corporations were politically neutral; but (in the color coding of Hungarian parties) some firms were known as "red" and others were recognized as "orange." Through field-spanning ties, partisanship migrated from the field of politics to the field of business.

Moreover, as our dyadic modeling indicates, this political tagging influenced the choice of other firms with which corporations shared the business tie of a director interlock. Red firms disproportionately aligned with other red firms; orange firms exhibited an elective affinity to link with other orange ones. Over time, as campaign budgets soared and competition for firms increased, partisanship reached so deeply into the economy that red firms and orange firms significantly avoided directorship business ties with each other, creating political holes in the economy. Our findings suggest that network analysts who find structural holes in network data should be attentive to the possibility that

such configurations might be attributable to the structure of political ties among the firms they are studying.

Our findings further suggest the need for comparative research that constructs comparable datasets on the structure of business-party alliances among different types of political economies. In the Hungarian case, we found that politicization reached a saturation level at approximately 20 percent of companies (and around 40 percent of capitalization) in the large corporate sector. Without comparable research it is difficult to assess whether these numbers are high or low. Are there cases (e.g., in Russia) where the majority of large firms are politicized? If Hungary is at the lower end of the range among emerging market economies, would its very high level of foreign ownership be an explanatory factor?

We argued that our findings indicate a different trajectory to a different kind of political capitalism than that suggested by prior research that focused on the former communist cadre converting their political power into economic power. Following this lead, a new comparative research agenda would address the various forms of party politics combined with various forms of privatization to map the distinctive forms of political capitalism in the post-socialist context. Study of post-communism will be reinvigorated by turning attention from circulation of elites to address the different ways in which firms and parties are organizationally entangled.

Looking to comparisons beyond post-socialist cases, when and where do political ties lead to polarization of the economy, depending on, for example, differences in party systems, stable incumbency, and legal systems that limit political board membership? In this vein, research would benefit from comparisons among cases of relatively recent democratization. The Hungarian and Chilean cases, for example, are likely to be instructive. There democracies emerged after communist and authoritarian rule, respectively, political cleavages are clearly structured, and party politics is a kind of national sport in each country. But despite sharp political differences, the Chilean economy, in contrast to the

Hungarian economy, shows signs of immunity to political polarization.⁸ Perhaps these outcomes are due to differences in institutional rules or to the history of electoral outcomes in which left and right did not alternate in Chile. Perhaps Chilean politicians and business people have more vivid memories of the personal difficulties of life under military dictatorship and so are more careful to keep politicization within the sphere of politics. Perhaps political leadership matters.

We should not be overly optimistic that the U.S. economy is immune to the reach of polarized politics. When political demagoguery is so rampant that even flu vaccinations have become politicized, we see partisanship raging so fiercely that it spills over into the sphere of civil society, creating blockages to individual family decisions that could be in the public good, even as political impasse hinders legislative decisions about health care, the environment, and economic policy in a period of protracted recession. Here, too, similar questions—about the role of institutional rules, memories of recent political scars, and political leadership—are on the research agenda. And so are questions about the extent, the structure, and the history of network ties that reach into and out of the political field. Tools of historical network analysis will not resolve the problems of rampant partisanship, but they can illuminate critical aspects of social processes that undermine the public good.

APPENDIX

Determining Significant Ownership

Instead of relying on predefined cutoffs to distinguish significant and minor owners, we adopted a clustering approach. To assess distribution of firms according to the concentration/dispersion of ownership, we used Ward hierarchical cluster analysis to find typical patterns of ownership based on the percentage shares held by a firm's first largest owner, second largest, third, fourth, and fifth for every year in which it existed as a company.

Because dispersed ownership was exceedingly rare in our population of firms, a two-cluster model was appropriate for representing ownership structure. An ownership structure with a dominant owner accounted for 45 percent of all firm-years. In this first cluster, the dominant owner held, on average, 98 percent of the shares, while the second owner held less than 2 percent. Second owners in this cluster were not classified as significant owners. The second cluster represents a coalitional structure in which the first owner held, on average, 51 percent of the shares, and the second held 25 percent. For firms in this cluster, we classified the first and second owners as significant.

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Authors' Note

We are alternating the order of authors' names across a series of papers produced from our broader project on historical network analysis.

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Notes

1. These studies were part of a wave of empirical research launched after the Federal Election Commission provided machine-readable data, starting in 1978. Widespread availability of these data made campaign contributions the data of choice for political sociologists studying the U.S. corporate elite.
2. To the extent that existing literature on ties linking economic and political fields deals with elections, it has done so almost exclusively by focusing on electoral campaigns (e.g., Burris 2005). In our third departure from the prevalent literature in the field, it matters that elections are not only held but that they have outcomes.

3. By gathering at the Courts of Registry addresses of each economic officeholder, we were able to distinguish particular individuals who shared the same given and family names (e.g., the János Nagy who resided on Petofi Street in Budapest was not the same János Nagy who lived on Kodály street in Kecskemet).
4. Whereas the Communist Party's Central Committee is analogous to the parliament of the subsequent democratic period, the Politburo is akin to the government's role in the later period.
5. Hungary is not exceptional in this regard. U.S. corporations frequently identify the party affiliations of former Senators and Congressional representatives in listings of their board members (e.g., John Breaux, D-La). Titles and party tags are affixed to individuals even after they leave office.
6. The category "domestic corporate ownership" represents firms with another Hungarian company as the primary owner. During the privatization process, many formerly state-owned firms were bought by other Hungarian firms, or large state-owned conglomerates disintegrated into smaller (but still substantial) firms with ownership relations among them.
7. Ideally, one would also control for unit specific heterogeneity via a random-effects or fixed-effects modeling approach. This was not technically feasible with our dyadic data, however; even with 64-bit large RAM capacity and high processing power such models were not possible to run. The pooled model here contains more than four million observations, and a random-effects or fixed-effects approach would need to control for variation within more than four hundred thousand unique dyads (which is roughly equivalent to a model with four million observations and four hundred thousand variables). The current state of computing accessible to us did not allow for this.
8. Personal communication, Samuel Valenzuela, Kellogg Institute for International Studies, University of Notre Dame.

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