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New Institutional Economics brought a growing consensus on the crucial importance of institutions and transaction costs as a prerequisite for economic growth. As early as the 1960s, Gerschenkron forcefully insisted that financial institutions (mixed banking and interlocking directorates) were among the key elements that facilitated "the most impressive catch-up in the 19th century" (that of Germany). More recently, Fukuyama (1995) found that trust, propensity for spontaneous sociability, and intermediary institutions between the state and the households (business associations and interlocks among others) can explain why some countries are able to embark on sustainable growth path.

Drawing on the works of Hilferding and Lenin in the 1970s and 1980s, business historians rushed into quantitative studies of interlocking directorates in various 'core' countries of Western Europe and North America. Because of data limitations, however, the role of networks in the 'periphery' has not yet been properly explored. This paper takes this unconventional perspective and uses it to try to shed more light on the effects of interlocking institutions on economic modernization in South-East Europe.

Until the 1960s, Bulgaria was the epitome of a peasant nation. Before World War II, more than 75% of the population were still on the land. It is still a matter of debate whether Bulgaria and its Balkan neighbors were locked in a downward growth spiral until the 1920s (Palairet, 1997) or achieved only a slow growth, unaccompanied by any significant change (Ivanov, 2012). Institutional explanations are often proposed for this 'growth without development'. In his chapter on Bulgaria, Gerschenkron (1962) famously blamed the banks and the state for what he called 'failed modernization'. In addition, Lampe (1986) and Lampe & Jackson (1982) insist on institutional rigidities (large bureaucracy, corruption and ill-functioning legal system) as the cause of sluggish economic performance. All of these hypotheses are presented in the form of qualitative narratives, which creates two problems. Firstly, they are not necessarily mutually exclusive, and secondly, they are not formulated in a way that allows for rigorous hypothesis testing.

The Interlocking networks perspective offers a unique chance to take a more rigorous and quantitative look at many of those propositions in an historical context. They could be a good indicator of trust and aptitude for creation of intermediate structures of sociability (Fukuyama, 1995). If, for example, it was the institutional settings that caused the 'failed modernization' in the European 'periphery', then we would expect to see low business inter-connectedness (low trust, few intermediary structures) and an absence of German type *Kreditbanken*.

Surprisingly, however, big business achieved comparatively high integration during the First Bulgarian Capitalism (1878–1947). Initially high levels of network density (3.7% in 1911) continued to increase (4.6% in 1929) until the end of 1930s when it reached 4.9%. World War II and the communist takeover that followed reversed that growth trend and by 1946 density dropped to 4.0%. With the nationalization that was declared in 1947, voluntary business connectedness was transformed into obligatory political connectivity. From that point on, company management was fully appointed by the Communist Party wiping out any interlocks that existed prior to nationalization.

The Communist takeover was accompanied by a wave of violence. Different estimates put the number of the victims in the immediate aftermath of the coup at between 20 and 50 thousand. Many of them belonged to the pre-WW II business elite. Others of the business elite emigrated or were sent to concentration camps. In 1946 private business private business property continued to exist and this allows for an assessment of a network in 1946. However in December 1947, all Bulgarian industry was nationalized, followed by all of Bulgaria's agriculture in the first half of the 1950s . After this, private business property did not exist in any legal form until after 1989. Thus, 1947 marks a sharp discontinuity in the personal and structural composition of production-related networks in Bulgaria. Almost none of the managers of the state-owned enterprises of the socialist era came from the pre-communist business elite. Structurally, horizontal links between enterprises were no longer important and emphasis shifted towards vertical linkages, especially linkages between managers of companies and party officials.

These linkages were usually formed at the local level, with local party officials often trying to boost their party careers by securing the construction of large enterprises in their regions. They promoted their economic importance to 'petition' the higher layers of the party hierarchy, more often than not dragging their comrade enterprise managers and directors up the enterprise management structure with them. Formal studies assessing these linkages in Bulgaria are rare. For obvious reasons the autobiographical literature does not stress this networking aspect of the socialist era. However, the authors have received confirmation of its existence through conversations with economists and economic historians of the socialist period.[1]

While close links probably existed between enterprises and the Communist Party, links between enterprises themselves were strictly mediated and controlled by the central plan; a complex, iterative, and multidimensional coordinating process. In all probability this process involved equally complex networking activities with each stakeholder striving to strategically position him or herself. However, no formal study of this important strategic mode of interaction – blending power, ideology, party organization, and business considerations – has been carried out for Bulgaria.

as in many other countries, after some successes in terms of capital accumulation, industrialization and increased production, eventually central planning proved to be a failure in Bulgaria. This failure was clearly felt by the 1980s, which were marked by a series of impotent attempts at reforming the Bulgarian socialist economy (Ivanov, 2007). From the perspective of business networking, the most important of these

[1] Conversations asking specific questions about such linkages were asked in the fall of 2012 during conversations with Roumen Avramov, prof. Ivan Angelov, Lubomir Christoff. They were able to recall careers of managers and directors closely related to party careers.

reforms were those from July 1987. The administrative division of the country was changed from 28 districts to 9 regions and these were joined with the economic system, with the socialist enterprises becoming a part of a larger 'economic associations'. This boverhaulrought about a broad and deep overhaul of the way the management of the economy was organized and involved a significant change in different linkages.

Only two years later, the centrally planned, socialist economy disintegrated and the process of slow creation of a market economy began. This process entailed a qualitatively different mode of selection of entrepreneurs, managers and business elite. Thus the years 1987-1990 represent another sharp discontinuity in the Bulgarian history of business networking.

Both sharp discontinuities – 1944-1947 and 1987-1990 – had a serious impact on business and when the market economy reemerged after 1989, previous levels of integration were never again achieved. Both in 1994 and 2005 the connectivity is so low (0.3%) that formal statistical analysis is meaningless.

Since the phenomenon of interlocking appears to be almost non-existent for the period of post-communist transition in Bulgaria, the major thrust of the analysis here concentrates on the period of the first Bulgarian capitalism (Section II). Section III outlines the main characteristics of the post-communist period, with the caveat noted above that the realities in that period do not permit any formal analysis.

I. Methodology and Sources

To be able to make comparisons between countries we selected six benchmark years: 1911/5, 1929, 1939, 1946, 1994 and 2005. 1911 was chosen as the earliest possible year for which company data could be collected, but the lack of 100 non-financials in that year led to an extension of the duration of the first benchmark 'year', so that the data are an average for 1911-1915. 1929 was the year before the the Great Depression, while 1939 was the last peaceful year for Bulgaria before

World War II. 1946 was the year before total nationalization of industrial enterprises and banks. After the beginning of Bulgaria's transition to a market economy in 1989, it took several years to establish new banking and company laws, while in 1996 the country plunged into a deep financial and economic crisis, making 1994 probably the best year of this sub-period. Finally, 2005 was the last year for which data was available at the time of the research.

No formal centralized records of Bulgarian businesses existed before the late-1990s, so various sources for identifying companies that would meet the requirements of the sampling procedure were used. For the period before 1947 this was achieved by utilizing the practice of most firms to publish their balance-sheets in *Durzhaven Vestnik* (State Gazette). This source provided an almost complete set of balance-sheets and allowed rating of the companies on the basis of their assets.

Data were far less accessible for the years immediately after 1989. Joint-stock companies are legally required to publish their balance-sheets, but it is up to them how and where these are published. As a result, most of the data appeared in obscure regional newspapers or on web-sites. So it became necessary to consult many publications by the Ministry of Finance, Financial Supervision Commission, National Statistical Institute (NSI), Bulgarian National Bank, etc..

Before 1947 Bulgaria fell within the so-called 'German boards system' with well distinguished Managerial (MB) and Supervisory Boards (SB) (Stokman et al., 1986). In addition, some big companies could elect an executive (also called administrative) board from MC members to assist executive-directors in their daily work. It was common to have outsiders appointed as executive-directors. The law required all changes in MC and AC, as well as in management (executive-directors), to be registered with the court. In practice, however, only few of the consulted company dossiers contained information on executives. For that reason the vast majority of those listed in the pre-1947 database are MC and AC members.

The lengthy process of data mining included visits to 23 of the 27 regional archives, where company files, credit dossiers, and commercial registers were consulted. After browsing these and carefully selecting members of the business elite, 2,937 individual names of businessmen sitting on the boards of the top 125 companies before 1947 were identified. For the post-1989 period, the collection of directors' names in top 125 companies was significantly easier because of the existence of the DAXI database. Utilzing this resource, we were able to select 1,388 relevant entries of 1,291 individuals sitting in the MC of the 125 largest Bulgarian businesses.

In the final stage of the data-collection, we attempted to amass additional information at both personal and firm level. For the pre-1947 period an additional data set with the names of members of independent professions, politicians, MC members of various NGOs, learned societies, and professional associations, as well as directors of the state-owned Bulgarian National Bank and Bulgarian Agricultural and Co-operative Bank was collected. This additional data set comprised 14,694 entries with over 10,000 individuals; members of Bulgarian political, cultural, and economic elite. To reconstruct the biographies of selected directors during the transition period (1989–2005) we consulted various encyclopedias, Internet, etc..

II. First Bulgarian Capitalism 1911/5-1946

Personalities

Affiliation to the (business) elite of one or another person is always subjective. We decided to 'draw a line' that restricts elite membership to participation in five or more top 125 companies for the entire period of 1911 to 1946. Even though still subjective, this criterion appears to produce a sufficiently representative list of big business prior to World War II. All of the 'usual suspects' are included; the Burovs are presented by four of their members, the Gubidelnikovs – by three and the Geshovs – by two, and so on.

Of the 137 names in this elite club as defined above, 25 (18%) were politicians (ministers or MPs). Another 39 were members of various professional associations, while 19% were connected with NGOs. It is unsurprising that the 'inner circle' (Useem, 1984) included 5 financial ministers, 12 directors of the Bulgarian National Bank as well as the Bulgarian Agricultural and Co-operative Banks.

Managers and top administrators deserve special attention. Their significant presence in the big business sample is particularly interesting since it marks the beginning of managerialism, which was thought to be characteristic of only the most developed economies. The managers (over 20% of the 'inner circle') were indeed large banks' CEOs, but also there are middle-level administrators, accountants, legal advisors and branch or department managers.

Taking a wider perspective than simply the 'core' (137 individuals) and moving to the whole sample (2,937 businessmen) allows us to study another facet of pre-1946 business elite. Over time, the level of the qualifications of the elite grew considerably; the group of specialists with scientific titles and ranks more than doubled. Foreigners and minority members had a significant presence in the big business occupying almost a third of the management positions. After the Great Depression their share started to diminish. Under the communist regime, however, minorities and foreigners almost vanish from the sample.

Our data provide an interesting overview of the family connections within the business elite; 'blood ties' bind at least one tenth of the large sample. Indeed, this figure may underestimate the phenomenon, as we were unable to recover a complete record of family relations between members of Bulgarian big business.

Fiercely criticized by contemporaries, (eg. Zahary Stoyanov, 1885) the so-called 'brothers-in-law syndrome' [2] had a rational explanation. In a low-trust, low-predictability society, 'partial networks' (Scott and Griff, 1984) created an archipelago of stability within which doing business was safer and cheaper. Morally

[2] The term was coined after the big Gubidelnikov family which was both politically and economically active. Through inter-marriages Gubidelnikovs managed to get allied with many of other prominent business families. In result they were brothers-in-low with many key figures of the elite.

and ethically based, the keen-econ group (Zeitlin and Ratcliff, 1975) significantly reduced risks of disloyal behavior and fraud. In the absence of a functioning legal system and state regulation, the easiest way to reducing transaction costs was by connecting a market institution (the firm) with a non-market structure (the family), based on moral and mutual aid. In the West, religious (notably Quakers) or minority groups (Huguenots, Jews) took on this stabilizing role. However, because of the marginal presence of such groups in Bulgarian society, the family was a successful substitute. In the East, 'blood relations' constituted a special type of social capital, one that could be mobilized to compensate for the poor state regulations. To some extend this is still the case.

Data limitations prevented us from undertaking a full comparison between the Bulgarian political and business elite. While the big business is determined as a selection of those owning big companies in 4 data points for politicians we are able to reconstruct the full time series (all ministers and MPs) for a long period of time 1878–1947. This methodological discrepancy left aside, both groups reveal astonishing similarity.

Seven out of ten businessmen appear only once in the sample, compared to six out of ten politicians. The similarity holds for other groups as well: from 2 to 5, from 6 to 10, from 11 to 20 and over 20. However, if we focus again on the 'inner circle' (those sitting on 5 or more company boards) and exclude foreign citizens, we find a surprisingly small overlap between both groups [which groups???]. Only about 20% of the business elite are involved in politics. Neither of the two groups exerted special dominance and the contacts between politics and economics seem sporadic. Speculation on possible reasons for this comes later in the chapter.

Companies

Shifting from people to companies, we are able to describe the 'working places' of big Bulgarian businessmen. The sample before 1947 consists of 376 firms, 69 of them financial and 307 non-financial. For 35 of them, no data about board members was found, these were excluded from the sample. They were substituted with the next 35 companies for which the relevant information was available. For company level analysis, however, we decided to include the 35 firms as well. We felt that, even without data about management, those companies are still members of the big business group. For this reason, the number of firms analyzed in this section is as follows: 133 in 1911/15, 141 in 1929, 149 in 1939, and 138 in 1946.

Company continuity was relatively weak. More than 2/3 of all corporations appeared only once in the four benchmark years while another 20% qualified in the elite group twice. It is particularly interesting to focus on the firms that are present in all benchmark years (1911/5, 1929, 1939, and 1946). Half of those 12 companies are in the financial sector while the other six were producers of cement, electricity, beer, paper, vegetable oil, and tobacco. Only two of them exploited relatively 'high' technologies: United Tobacco Factories and *Grantiond*, both of which were the largest Bulgarian firms before and after World War I. All of the remaining corporations operated in low-tech, low-capital segments (vegetable oil, beer) or in first generation sectors (textile, paper & pulp). Industries that formed the backbone of most advanced economies – such as engineering, chemicals, pharmaceuticals, automobile and aircraft construction – were simply not present in Bulgaria.

Before World War I, big Bulgarian business existed predominantly in the country-side. In 1911/15 only 39% of all top 125 firms were created in the capital city. Economically, the most dynamic competitors to Sofia were the cities of Ruse (15% share in 1911/15), Varna and Plovdiv. In the 1920s, and especially in the 1930s, geographic decentralization weakened and the capital city almost completely dominated the profile of large Bulgarian business. Spatial coverage, however, was astonishingly stable, only varying from 22 to 25 cities/towns. Among the preferred foreign cities were big sea ports like Amsterdam, Rotterdam, New York, Manchester, Trieste or the capitals of Bulgaria's main trading partners: Berlin, London, Paris, or Bucharest.

The data reveal the high level of sectorial rigidity of large business during the four decades under review. Bulgarian entrepreneurs seemed unable to develop second-generation industries. Low-tech, low-capital branches dominate the profile of the sample. Individual trajectories of the chemical and electricity producing industries only confirm that picture. During the interwar years, their share of the market [??] hardly progressed as compared with the period before World War I. Textile seems to be the only 'success story'. 1920s and 1930s were particularly good for Bulgarian textile industry representing a period when it attracted a growing number of foreign – mainly Italian and German – investments.

Inner groupings within big business traditionally attract research interest and trigger heated debates. Various quantitative measures are usually applied in the literature to detect power hubs within the business network (eg. Mizruchi, 1982). In their pioneering study of the so-called 'monopolistic capitalism', however, Natan and Berov (1958) base their analysis of large Bulgarian companies on more qualitative information. Having constructed a large database at the company level, we were able to bypass many of the problems encountered by Natan and Berov and apply quantitative measures to distinguish different clusters. It is a common wisdom in the literature to define 'social cliques' as a "small group within the social network in which members are closer and more tightly connected than other members of the network" (Degenne and Forse, 1999: 79).

In a case study of the cluster around *Bulgarska Tugrovska Banka* (BTB) (Ivanov, 2010), however, it became apparent that the standard definition (a segment of the network where all members are closely connected with one another) cannot be directly applied to the pre-1947 Bulgarian economy. For this reason we applied instead the Seidman and Foster (1978) methodology that is based on *k*-plexes. Drawing again on the BTB case study, we determined *n* to be 5 and *k* -1. Using *UCINET 6* software, we searched for any 'social cliques' that consisted of at least 5 members, who were connected either with all other members or with all other members but one. Using this method, we discovered 17 'social cliques' in 1911/15, 22 in 1929, 20 in 1939 and 17 in 1946. It is usual for the *k*-plex methodology to yield such fragmentation of the network. So, following Sonquist and Koenig (1976) as a second step, we attempted to group many of the smaller 'social cliques' into larger clusters; all groups where at least one third of their members overlapped were joined.

Table 1. Cluster Fragmentation of the Business Elite, 1911–1946

	1911/5	*1929*	*1939*	*1946*
Clusters	5	7	8	6
1. Cluster Properties				
Average number of members	9.2	8.0	8.8	8.2
Number of members in the largest cluster	13	16	18	13
Average number of connections	9.0	9.8	9.9	7.9
Integration coefficient*	1.0	1.2	1.1	1.0
2. Cluster Types				
Financial	4	5	**5 + 2	4
Geographic	0	0	0	0
Suppler-client	0	0	0	0
Foreign company	1	0	0	0
Managerial	0	1	2	1
Falling outside the „inner circle'	0	2	1	1

Source: Ivanov and Ganev, 2009.

Notes:
* Integration coefficient returns the ratio between the average number of connections in the cluster and the number of its members.
** In 5 of the clusters are totally controlled by a financial corporation and in the other 2 the control is shared by financial and non-financial company.

Two important findings stand out from table 1. The first is the stability of the internal fragmentation within the elite. Measured both by the average number of members and by the connections between them, Bulgarian business 'cliques' seem to be rigid formations with a stable integration coefficient. Secondly most, if not all, groups were clustered around a financial institution.

If we disaggregate the picture in table 1, several important trends appear. On the eve of World War I, the business elite was distributed among five distinct 'cores'. Two decades later, boundaries between different 'factions' become increasingly blurred. The growing number of 'cliques' in 1929 and 1939 could be attributed not only to the entry of new players – the Italian bank *Commerciale*, the German group of *Granitoid* and Credit Bank, for example – but also to the creation of intermediate sub-structures, which reconciled contradictions between the former separate cores of the elite. By 1946, half of all clusters were actually connecting links between the traditional 'factions' of the big business.

Elite consolidation and the wiping out of former boundaries through a dense network of cross-investments had important social significance. Corporate alliances came about as a response to the growing public hostility towards big business. The end of industrial protectionism in the early 1930s, the growing influence anti-capitalist parties – on the left and right – after World War I and the emergence of a serious competitor in the face of co-operative movement (Avramov, 2007) all contributed to the unification of the elite. It was not just the clusters that tended to consolidate, all big companies showed a persistent, high propensity to co-operation as well.

Table 2. Business Network Density (in%)

	1900s	*1920s*	*1930s*	*1940s*
Bulgaria	3.70 (1911)	4.60 (1929)	4.90 (1939)	4.00 (1945)
Sweden	2.70 (1903)	5.60 (1924)	5.00 (1939)	n/a
United Kingdom	1.30 (1904)	n/a	1.90 (1938)	n/a
United States	7.20 (1912)	7.60 (1919)	5.60 (1935)	n/a

Source: Bulgaria – authors'calculations, Sweden – personal communication with Jan Ottoson, the U.K. – Scott and Griff (1984: 40); the U.S. – Mizruchi (1982: 105).

Bulgarian businessmen were certainly not less inclined to network and co-operate than their U.K. or Swedish colleagues, and displayed these characteristics in the same order of magnitude as the U.S. While there are certainly different methodologies used in the different studies, it is unlikely that this fact changes the picture qualitatively. The Bulgarian level of network density is comparable to that in the U.S. and Sweden and significantly exceeds the cohesion of British big business.

Over time, a growing number of firms were integrated into the big business network. The share of the companies that were not connected to any other of the top 125 corporations drops from 24% in 1911/15 to just 14% in 1946. In other words, almost 90% of all large companies had some links with other members of the elite. This increasing connectivity is even more striking when compared with other European countries. A fifth of British big businesses were unintegrated and this reluctance to integrate appears to be a stable phenomenon in the U.K. As Scott and Griff (1984) report, the share of companies that were not connected to any other firm in the UK sample was surprisingly constant between 1904 (21%) and 1938 (20%).

The interlocked position ratio (IPR), proposed by Mizruchi (1982), also confirms the rising homogeneity of the Bulgarian business elite. IPR measures the ratio between total number of directors in the sample and the number of all established connections among them. Since 1910, Bulgarian business IPR was twice as large as that of the U.S. Moreover by the 1930s, Bulgarian IPR reached 92.7 while American big business only manage 32.3.

What stands out is the high level of consolidation among the Bulgarian business elite. This quantitative evidence is reinforced by the qualitative narrative. Perhaps most compelling is the reaction to the growing political threats from the left and populist movements in the early 1920s. As a result of World War I, the Agrarian Union won the 1919 elections decisively, while the Bulgarian communists formed the second largest faction in the National Assembly. Controversial Agrarian legislation – land reform, limited nationalization of urban property, increased taxation on joint stock companies and significant tax cuts for co-operatives for example – constituted vivid political threats to big business. putting its faith in the support of the para-military Orange Guard, the Agrarian Union 'broke the neck' of the opposition. The leaders of 'Bourgeois' parties were imprisoned or beaten by raging Orange Guard squads and opposition rallies were disbanded.

With all opportunities for political opposition to the Agrarian regime shut down, large corporations opted for consolidation. By the end of 1921, key figures of the 'inner circle' had initiated a new political formation; *Naroden Sgovor* (People's Accord). It was designed to unite politicians from different parties. With the same purpose, 'to unite and organize' all anti-Agrarian forces, the *Stopansko Razvitie* company was also created, while its official aim was to finance the *Naroden Sgovor* newspaper (Gerogiev, 1989). Its importance, however, vastly exceeded that of a funding body for the opposition. The urgency of the situation required extraordinary measures and it resulted in the Bulgarian 'inner circle' formally revealing its informal power to the public for the first time. Institutionalization of *Stopansko Razvitie*, where the board comprised many of the most important business leaders, was nothing less than a declaration of war on the Agrarian regime.

In addition, this corporate project also functioned as a positive test for the high level of integration among the elite and its readiness for collaboration. Through the *Stopansko Razvitie* company, Bulgarian big business took the lead in organizing its 'class' resources to attempt to neutralize the government's business-unfriendly agenda. The result of this open political activism by the large corporations was the creation of a new trans-party group, which, in 1923, succeeded in deposing the Agrarian regime, with the help of the military (Petrova, 1988). As can be seen in table 3, the 'inner circle' was well prepared to take on leadership.

Table 3. Assets of the Largest Bulgarian Companies, 1911– 1946, as% of GDP

	1911/15	*1929*	*1939*	*1946*
Top 125 companies	39.38	36.49	41.69	42.50
Top 50 companies	25.95	33.56	37.57	39.57
Top 10 companies	17.29	23.64	27.47	33.41

Source: see text

In 1911/15 the core of the 'inner circle' (the top 10 companies) controlled about one eighth of total GDP. Two decades later, its assets had increased to 33% of GDP. Furthermore, the top 50 companies achieved almost full control of all assets of big business. It was precisely this gain in resources that compensated the low (20%)

overlap between political and business elite mentioned above. In possession of an disproportionate share of the national wealth, big business apparently felt no need to take ‘manual control’ of politics by placing ‘agents’ in either political parties or state administration.

The Bulgarian Paradox

The high coherence of Bulgarian business elite and the wide spread of interlocking practices in a low-trust society demands an explanation. Different accounts have been proposed in the literature. According to some, these sub-groups were specially tailored to ease access to various resources (financial interlocking, supplier-client interlocking etc.). Others insist on a regional or political motivation for the creation of business ‘cliques’. A third strand of thought highlights the ‘exploitation’ and control of big business over small and weak companies.[3] Other possibilities have also been explored; interlocking increased effectiveness (and profits), capital-intensive sub-sectors (heavy industry) were more prone to interlocking, if it was mainly old and more stable corporations or young and weaker companies which tended to interlock more or if the centralization in the capital broke old regional ties between companies.

Several dependent variables were tested for measuring various forms of company centrality: centrality degree, centrality power, and ‘between-ness’. For independent variables, the following indicators were used: size measured by equity; age in years since establishment; ROE and ROA (both in%). Additional dummy variables were added for Sofia, for banks, and for heavy industry branch.

Table 4. Explanatory variables for Interlocking

	Centrality degree	*Centrality power*	*Betweenness*
size (per million levs)	0.004 (0.42)	0.001 (0.86)	0.141 (0.03)
age (years)	0.128 (0.01)	-0.010 (0.83)	1.670 (0.01)
ROE	-0.005 (0.47)	-0.002 (0.77)	-0.003 (0.98)

[3] For an extensive review of the literature cf. Mizruchi (1982); Sweezy (1953) and Pennings (1980).

ROA	2.541 (0.59)	-7.882 (0.10)	93.90 (0.18)
Sofia	3.658 (0.00)	0.295 (0.75)	63.88 (0.00)
Banks	5.119 (0.00)	-0.164 (0.88)	65.21 (0.00)
Heavy industry	1.561 (0.13)	-1.407 (0.17)	15.92 (0.29)

Note: p-values in brackets
Source: see text

The regression analysis, with all probable explanations suggested in the literature, proved negative. Neither financial interlocking, nor regional/geographic interlocking nor profitability could completely explain the high density levels of Bulgarian business network. The answer, however, may come from somewhere unexpected. Compelled to operate in a low-trust society, ravaged by corruption and inefficient administration, perhaps Bulgarian entrepreneurs sought 'domestication' of business environment through interlocks rather than improvement in efficiency and profitability. By entering into strategic coalitions with other companies, large corporations attempted to secure their survival (and longevity). This is not to say, indeed, that everywhere in Europe interlocking was undertaken to compensate for deficiencies of the legal system (for opposite examples cf. the situation in Switzerland and the Netherlands). In the 'periphery', however, we have strong reasons to believe that high coherence was perceived as a tool for improving the business environment.

This corroborates Ivanov's (2010) case-study of *Bulgarska Tugrovska Banka*, established in 1895. For many decades it was one of the most prominent universal banking institutions in Bulgaria. In the financial services sector a hostile, low-trust business environment was exacerbated by the fundamental discrepancy between short-term (even sight) liabilities and the long-term structure of assets. Most of the savings in a non-market agrarian economy based on smallholding, were non-monetary in nature – food surpluses, for example – and rarely entered the banking system. When banks were geographically far away (in towns) or untrustworthy, cash savings were either hoarded 'under the mattress' or come as sight deposits [??} at best. On the other side of the equation was the bank credit portfolio, which was flooded with long-term claims (on current account or quasi-short term discount bills that were often renewed at maturity). To make the business of banking even more hazardous, there was no safety net. Prior to World War I the Central bank had no legal responsibility to provide additional liquidity as a lender of last resort.

At first *Bulgarska Turgovska* tried to balance this fundamental discrepancy by maintaining an extremely high capital adequacy of greater than 30%, when 18% was the norm advocated by George Rae (1885). Their capital to credit ratio was over 50% and at times even reached 80%. Just like the early American banks (Lamoreaux, 1994; Wang, 2008), in an effort to minimize information asymmetries *Bulgarska Turgovska* invested most of its funds in large internal credit. This was a lucrative business when the economy was growing in early 1890s. Several bad harvests at the turn of the century, however, put an abrupt end to the success of this model. Two of BTB's key shareholders and debtors declared bankruptcy in 1899 and 1902, which almost sank the bank. *Bulgarska Turgovska* managed to survive due only to its high capital ratio and the small amount of deposits attracted in the previous boom years.

It took almost a decade to clean the balance sheet of the burden of toxic credit. Meanwhile large German, Austrian and French banks entered the market, dramatically changing the Bulgarian banking landscape. In order to preserve its leading position in the financial sector, this flag-ship Bulgarian business had to abandon its previous strategy of over-capitalization and opt for a more outward model. Inherent risks of credit expansion were addressed by new, more rigid, procedures of approving credit applications and through membership of a series of social and economic networks.

After 1905, *Bulgarska Turgovska* initiated or entered several networks, a tactic that soon proved very successful. Together with the geographic expansion of regional branches, the interlocking of the 'kin-econ' (intermarriages), and the political (the conservative Popular party) networks with industry had an important impact on future bank development. It is these investments in *social* capital that enabled BTB to overcome the 1899–1902 crisis, to effectively compete with foreign banks after 1907 and to become the largest Bulgarian company in 1912 with over 50m levs (roughly £2m) in assets. The dense network of social and economic interlocks provided *Bulgarska Turgovska* with a high-trust, low-risk hinterland, which was far more diversified than the once practiced insider lending to board members.

This coalition of industrial and financial companies had the potential to tackle many of the fundamental deficits of the Bulgarian financial sector. Through tighter monitoring and routine contacts, *Bulgarska Turgovska* could collateralize credit to interlocked enterprises and secure better information. In addition, special relations with key clients could increase maturity of their deposits held with BTB, thus reducing the overall temporal discrepancy between assets and liabilities. Last but not least, surrounded by large, lucrative companies, if it found itself in trouble, *Bulgarska Turgovska* was in a position to draw liquidity from 'family member' corporations, substituting them for the missing lender of last resort.

If it was the case in Germany that *Kreditbanken* was able to hasten the industrialization effort, (still much debated in the literature, cf. Fohlin, 2007, Battilossi, 2009), in the 'periphery', universal banking institutions were completely different both in profile and in their tasks. In Central Europe it is likely that mixed banking served as an instrument to break down 'road-blocks' to industrialization and to channel capital into manufacturing. In the south and south-eastern fringes of the continent, however, mixed banking should be seen more as a compensatory mechanism for severe deficits in the business environment (low-trust) and fundamental problems of financial sector (fundamental discrepancy between assets and liabilities). It is no wonder that in the Eastern European 'periphery', purely from a developmental perspective, universal banks had minimal impact on economic growth. Here their task was not to destroy, but to compensate for social and economic rigidities, thus perpetuating the existing ineffective institutions.

III. No interlocking: 1989-2005

The methodology used in this study, based on social networking analysis techniques, does not allow for an analysis of any year during the communist period in Bulgaria. As already mentioned, the reasons for this are twofold. First, all managerial appointments were made through party decision, so all companies were connected through the Communist Party. Second, the managerial structure stressed the person of the executive director, the members of what could be conditionally seen as a managerial board were involved in principle with only one enterprise and, if interlocked directorships were to be found at all, the same person being involved in directorships in different enterprises was a rare exception. Enterprises were interlocked not through people, but through the Party, line ministries and, especially, through the Plan. None of these type of linkages can be captured through social network analysis methods. It is not that no network analysis of the communist period is possible, on the contrary it may be of considerable value, it cannot possibly be performed using the instruments of the methodology used in the present study however. The analysis of business networks for the periods before and after communism, and thus any results would not be strictly comparable to those within it.

Initially we wanted to include 1989 as a benchmark year. It was the final year of the communist rule and a period when the regime experimented with moderate economic reforms. A special Decree #56 was adopted, tailored to transform the state-owned factories into joint-stock companies. The fall of the Berlin Wall prevented the reform from being implemented fully, but following the Decree, in the months before November 1989, several hundred firms were re-registered.

It had been our hope that this new registration would provide the necessary information. However upon closer inspection, it became apparent that only small factories had been re-registered following Decree #56. The majority of big socialist enterprises like the Nuclear Power Plant at Kozloduy, the *Neftochim* oil refinery or the *Kremikovtsy* steel plant, were all excluded from the reform. It was therefore regrettable that, due to those data limitations, 1989 could not feature as a benchmark year.

Personalities

As mentioned earlier in the description of the data collection, the year 1989 created significant problems for the collection of the data in the format required by the methodology used here. However, the list of available managers of companies, which were transformed into joint-stock firms in 1989 under Decree 56 allows for an expansive interpretation of who is a member of the business elite at this time. In this case, such an expansive interpretation might be misleading if the data indicate many names that appear in both 1989 and in later lists of business elite members. But since this is not the case in Bulgaria, the use of this expansive list of 1989 is still quite interesting. All in all, there are 1847 names among the managers and directors of the largest (for 1989 – all listed) companies. As table 5 (below) shows, the proportion of multiple participations is extremely low.

Table 5. Bulgarian Big Business elite 1989-2005

Number of times person appears in the sample	*Business Elite*	
	People	*Share, %*
1	1739	94.1
2	101	5.5
3	7	0.4

Source: see text

With less than half of one per cent of the sample having three connections and none with more than three for the whole period, it is impossible to talk about a 'core' group of interlockers.

Companies

The fact that there are only two data points in our study for the post-communist period in Bulgaria, which are made under the adopted methodology, means that there is insufficient longevity to make informative inferences about continuous presence of some companies among the top 125 in the country's economy during this period. However, because we observe that in the relatively short period between 1994 and 2005, 85 companies – or 68% of the sample of big firms – were replaced by others reflects a distinct lack of continuity. This is not difficult to justify. Within the decade framed by the two observation points, Bulgaria's economy underwent two severe structural shocks; the financial and deep economic crisis of 1996-1997 followed by a massive wave of privatization.

In the period after 1989, there are very low levels of business connectivity in Bulgaria among the top 125 firms. Less than a quarter of the companies have even one connection, all the rest have one or two, and only one company (Biochim bank) has three connections in 1994, from a list of 210 different companies that comprised the top 125 companies between the two benchmark years.

Table 6. Levels of Business Connectivity in Bulgaria, 1994 and 2005, in %

Number of connections	*Bulgaria*	
	1994	*2005*
0	72.8	67.2
1	18.4	25.6
2	8.0	6.4
3	0.8	0.0

Source: see text

In line with the observed extremely low connectivity between the top 125 firms in Bulgaria in the post-communist period, all measures describing the group, such as density, centrality, 'between-ness', etc., are extremely small and indicate the *de facto* lack of a social network. For example, in both 1994 and 2005 the density of the connections between the top Bulgarian firms is 0.3%, and the average degree is 0.2,. If a valued, rather than binary, matrix is used to reflect the likelihood of connection of firms through more than one person, and the appropriate maximal theoretical number of links accommodating the number of seats in the governing bodies of the firms is used, the densities in both years are even lower at 0.1%.

Under these conditions, a formal analysis of clusters or of factors determining cliques, central players, and their role in the economy or on specific sectors becomes statistically meaningless. Only several clear tendencies can be outlined. First, in both 1994 and 2005 a leading connecting factor is whether a company belongs to a certain branch of industry. Second, foreign ownership through privatization has become a major connecting factor, including a significant increase in the number of foreign citizens becoming interlockers. Third, between the two benchmark years, the role of banks as connecting factors has decreased.

Some interpretations of the post-communist results

These results can serve only as a very limited basis for comparing Bulgarian post-communist realities with other post-communist nations, especially the well studied case of Hungary, as investigated in Stark and Vedres (2006, 2012). In their research, they use a rich sample almost 1700 firms continuously from 1987 to 2001 in order to study the dynamics of business networking from various perspectives; strategies towards uncertainty, foreign capital involvement, and political party affiliations for example. They show that “between 1987 and 2001 networked property grew, stabilized and involved a growing proportion of foreign capital” (Stark and Vedres 2006, p. 1367) and that during the same period “director interlocks depend, to a significant extent, on political affiliations” (Stark and Vedres 2012, p. 700).

The Hungarian dataset is much richer than the available set for Bulgaria – by significant orders of magnitude in both number of firms and years of observation. However, despite the very limited comparability, one definite similarity and one possible difference can be observed. The similarity is the obvious increase between 1994 and 2005 in Bulgaria of the role among the networked firms of the foreign-owned ones, mostly due to banking and industrial privatization (Ivanov and Ganev 2009, p. 79). The possible difference is in the political linkages of networked firms. In Hungary Stark and Vedres show that political affiliations with a specific party are significant, in Bulgaria a different model of links between businesses that relies on political connections and politics seems to be emerging. In both Bulgaria and Hungary firms feel compelled to manage political risks through having specific connections to political parties. As the studies conducted by the Center for the Study of Democracy (CSD Hidden Economy; CSD SOCTA 2012) indicate, both shadow criminal and larger legitimate businesses control the surrounding political uncertainty by developing connections with all political parties, rather than with a specific one (in a sense, buying insurance). This strategy limits their opportunities at times when ‘their’ party is in power, but also limits the threats in times when ‘other’ parties are in power.

The lack of a social network among the top Bulgarian firms in the post-communist period is an interesting phenomenon, whose explanation may provide valuable knowledge about the state of the Bulgarian economy. Given the paucity of available network data, however, such an explanation cannot be arrived at using the tools on which the analysis presented here is based. At present these tools give only one certain inference; the two periods of Bulgarian capitalism (pre-World War II and post-1989) are radically different in terms of how business elites are formed and interact.

At this point, without any formal checking of hypotheses, only theoretically possible explanations for the missing Bulgarian elite business network of the post-communist transition can be offered,.

The first group of such hypotheses are based on the assumption that people and companies have rational reasons not to connect. Connectivity is costly and if the costs exceed the benefits, it may not happen. Strategies to achieve access to, and control over, scarce resources in ways which are an alternative to (direct) business connectivity may be more attractive – such as relations with a foreign or governmental owner or maintenance of achieved or inherited monopoly positions. Time may also be an important factor for this group of hypotheses – connectivity is costly, with costs being incurred more in the short run, and benefits in the long run, so a viable network might be slow to emerge; perhaps 15 years since 1989 is too short a period. There might even be legal impediments to the quick emergence of business connections among the top firms in the country.

The second group of possible hypotheses that could explain the lack of an elite business network in Bulgaria after 1989 relates to the focus of the methodology. It looks at only the largest enterprises, and assumes that the members of the elite directly participate in their governing bodies. In a post-communist context, for various reasons, both assumptions may be problematic. Firms may be connected not directly, but through common participation in other firms that are smaller in size, but perhaps not in influence. Directors of big companies may simply be representatives of the truly influential elite connected not through sharing board seats, but through alternative social networks, like clubs, biographical personal connections, or connections clustered around political entities. This is especially possible when business connections are deliberately hidden. If a member of the business elite is associated with the grey or black economy, for example, there is a strong incentive to hide. Or perhaps they do not wish to attract attention to corrupt practices. Attempts to circumvent anti-trust legal provisions would also provide incentive to keep linkages hidden.

IV. Summary of the main results

The study presented here performs a social network analysis of the largest Bulgarian firms in six different benchmarks years in the 20th century; four from the first half of the century, reflecting the period of the First Bulgarian Capitalism, and two mark the transition from centrally planned towards a market economy.

The results from the two periods are very different. Prior to 1947, the network connectivity among Bulgarian elite businesses was at levels comparable to the then developed economies. The presence of a large number of personalities with multiple participations, with specific characteristics and biographies, also confirms a clear emergence of managerialism. There are also clearly identifiable important subgroups of companies. The level of ‘intermingling’ of the business and political elites is relatively low. The statistical analysis lends some support to the inference that interlocking served as a compensatory mechanism for existing deficiencies and rigidities in the business environment.

In stark contrast, the methodology employed detects no elite business social networks in the post-communist period; groupings among the largest companies are rare and small. In fact, connectivity is so low that formal statistical analysis is impossible or meaningless. There are various possible reasons for the lack of detection of a network between the largest Bulgarian companies after 1989 under the methodology of this study, the hypothesising and testing of which might be usefully pursued in future research.

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