Socio-Economic Review, 2023, Vol. 21, No. 1, 213–242
https://doi.org/10.1093/ser/mwac049
Advance Access Publication Date: 10 August 2022
Article

Article

Liberalization, democratization and the remaking of the South African corporate network 1993–2020

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Abstract

Two broad, complementary approaches have defined the literature on interlocking directorates. Inter-organizational theories see them as an outgrowth of firms' efforts to monitor and manage their commercial environment. Intra-class theories focus on their functionality in harmonizing and coordinating the political action of different segments of the capitalist elite. But comparative work on network formation has drawn almost exclusively on the first of these approaches—linking variation in typologies to the economic institutions that shape patterns of inter-firm engagement. Here I deploy a synthesis of inter-organizational and intra-class theories to understand the evolution of the South African corporate network over the post-Apartheid period. I trace out a broad trend of fragmentation as a hierarchical business system gave way to one modeled on Anglo-Saxon lines. But I also demonstrate the persistence of a cohesive core in the network, firstly centered around the historically dominant social bloc, and subsequently around the personal networks of politically connected black directors. The results show the potential of intra-class theories to enrich our understanding of how corporate networks form and change.

Key words: elites, networks, institutional change, globalization

JEL classification: L22

1. Introduction

There have been two dominant approaches to understanding why corporations form interlocking directorates. Inter-organizational theories see them as tools for managing resource interdependencies and for monitoring uncertain environments (Burt, 1983; Useem, 1984; Pfeffer and Salancik, 2003). An intra-class perspective contends that is it the social and political networks of the dominant capitalist families and individuals that provide the scaffolding around which interlocks form (Koenig *et al.*, 1979; Ornstein, 1984; Mizruchi, 1992). Overlapping directorates strengthen personal ties within the dominant class and help to align and coordinate potentially diverging interest blocs. These perspectives are complementary and amenable to synthesis (Mizruchi, 1992). The core insight of such a synthesis is that interlocks help firms to manage and monitor not simply their economic but their political environment. Factors which affect the general salience of political coordination and collective action among different segments of the capitalist class will therefore influence the typology of the network as a whole.

However, this insight has been generally missing from comparative research on corporate networks (CNs). The latter has focused on how institutional arrangements inscribe distinct 'coordinating mechanisms' which define how firms compete and collaborate over economic issues (van Veen and Kratzer, 2011; Cárdenas, 2012; David and Westerhuis, 2014). It has uncovered a broad distinction between the denser, more clustered networks of economies where direct collaboration and bargaining is the norm, and the more diffuse networks found in cases where a market nexus prevails. A broad trend toward network fragmentation has thus been brought about by the gradual liberalization of institutions through globalization and financialization (Kogut, 2012; David and Westerhuis, 2014). But much variation, both cross-sectional and longitudinal, remains unaccounted for, particularly outside of the global North (Naudet and Dubost, 2016). Reintegrating intra-class perspectives on network formation may help to fill these gaps.

Here I explore the political aspects of CN formation through a longitudinal investigation of an understudied case—post-Apartheid South Africa. South Africa provides an interesting vantage for this undertaking because of the dual political and institutional revolutions it experienced from the mid-1990s onwards. Under considerable domestic and international pressure, the African National Congress (ANC) government which assumed power in the first democratic elections in 1994, abandoned its long-espoused vision of redistributive social democracy in favor of globalization and market-guided transformation (Padayachee and Niekerk, 2019). This led to a dramatic reconfiguration of corporate and financial institutions in which a hierarchical business system, dominated by a handful of family-controlled groups, gave way to one modeled closely on Anglo-Saxon lines. As the market nexus began to intercede the strategic interaction of firms, replacing the authority and inter-personal ties of controlling families, the network should have fragmented sharply—at least according to dominant inter-organizational approaches.

But inter-class theories suggest that the dramatic political changes occurring conterminously with institutional transformation should have had their own impact on networking patterns. Democratization permanently altered the balance of political power in the country. The ANC, allied to the Communist Party and the largest trade union federation, amassed an unassailable electoral majority and rapidly began fusing itself with the state by 'deploying' its members into all levels of the bureaucracy. Business elites found themselves confronting powerful class opponents while cut off from the close ties they had previously enjoyed to those with governing power. This would have created strong pressures to maintain political unity across sectoral and other divides. But a more specific challenge for big business was to re-forge connections to the new political class. According to one interpretation, this was significance of Black Economic Empowerment policies for historically white corporations (Tangri and Southall, 2008; Nölke and Claar, 2013). They allowed for the co-optation of a layer of well-networked, politically connected black directors who could represent corporate interests to the state, playing the role of an 'inner circle' (Useem, 1984).

I predict that these forces would have had a cohering effect on the network, partly counteracting fragmentary pressures arising from liberalization. I test this hypothesis in a two-step analysis. First, I examine the broad historical evolution of the CN from 1993 to 2018 in a comparative frame, concentrating on the largest 125 firms. Second, I zero in on the contemporary (2020) network, undertaking a meso-level analysis to reveal more cohesive substructures, and examining how the integration of politically connected black directors has contributed to their formation.

I find that, under liberalization, the CN underwent a broad typological transformation from a clustered, hierarchical network to one that was more diffuse. Yet far from succumbing to a unilinear trend of fragmentation, the post-Apartheid CN is characterized by the persistence of cohesive cliques at its center. In the first decade of democracy, a cohesive core was formed through a proliferation of ties among firms that had been members of the so-called Minerals-Energy Complex (MEC), which was comprised of the six dominant business groups (Fine and Rustomjee, 1996). These findings appear to support a prominent interpretation of post-Apartheid political economy which contends that the MEC weathered the reconfiguration of ownership structures during the transition, and continued to act as a more or less coherent 'social bloc', dominating policymaking and influencing patterns of accumulation across the economy (Ashman *et al.*, 2011, 2013).

This core eroded after 2005. But a cohesive blocking routine reveals that a new, more sectorally-diverse formation of 59 firms assumed its place at the center of the network. Using regressions, I show that the best predictor of membership within the core is the number of politically connected directors on a firm's board—the vast majority of whom are black. Contrary to analyses that see BEE as a persisting source of division within the elite, the network view thus suggests that black elite formation has contributed to cross-class cohesion. These results provide evidence of in favor of inter-class theories of network formation, according to which political institutions and strategic contexts shaping incentives for cohesion-building can have substantial effects on network formation.

The following section of this paper reviews theories of interlocking and their application to comparative work. Section 3 derives hypotheses on network evolution from a brief history of institutional change and elite formation in post-Apartheid South Africa, while Section 4 outlines methods and Section 5 data. Results are presented Section 7 and their significance for theories of CN formation and the study South African political economy are discussed in section 8; while Section 9 concludes. A note on terminology: following common tradition in South Africa stemming from the anti-apartheid movement I use 'black' to refer to all previously-oppressed groups, i.e. all non-whites.

2. International perspectives on CNs

Why do interlocks form? There have been two dominant approaches to answering this question. One starts from a conception of firms as organizations striving to reproduce themselves in a competitive and uncertain environment. Interlocks are one among many instruments that they use to surveil a strategic field and to manage inter-dependencies with other organizations, solidifying access to vital resources (Burt, 1983; Useem, 1984; Palmer, 1987; Pfeffer and Salancik, 2003). In their original iteration, inter-organizational theories tended to assume that interlocks facilitated formal coordination between firms that had direct interdependencies in supply chains or credit markets, etc. But research showing that firms tended not to reprise ties that were accidently severed showed that formal coordination was likely a lesser motive for interlocking (Koenig *et al.*, 1979; Ornstein, 1984).

Subsequent attention devolved to their communicative and informational functions. Useem (1984) famously argued that they reflected the imperative for firms to engage in 'business scan'—monitoring and surveying a wide strategic field, for which directors with cross-sectoral experience were especially important. Banks and large financial institutions have often been founded to occupy the most central network positions, reflecting their systemic role in the allocation of capital, which made their boards attractive to a wide range of corporate representatives (Mintz and Schwartz, 1985).

In the second major approach, the 'wider context for corporate decision making is a network not of organizations, but of individuals within the dominant class, whose particular interests are crystallized not in specific corporations but in control groups (families, kinecon groups or financial cliques)' (Sapinski and Carroll, 2018, p. 4). Interlocks facilitate personal bonds both within and between these control groups, acting as one more hub in a wider institutional infrastructure that serves to socialize and cohere the economic elite (Zeitlin, 1974; Ornstein, 1984; Mizruchi, 1992; Heemskerk, 2010). At the same time, they help to manage and reconcile potentially diverging political interests of the different control groups. Rather than resources access, then, it is the 'diffuse ideological and political goals' of the dominant capitalist families that drive their formation (Ornstein, 1984, p.230). Various studies have shown that interlocks occur more frequently among elites with similar personal and geographic backgrounds and common membership on philanthropic and civic bodies (Koenig *et al.*, 1979; Ornstein, 1984; Heemskerk, 2010).

Early intra-class theories, however, placed undue emphasis on family and kinship groups in upholding and reproducing the class structures of the elite. As Mizruchi (1992) notes, in modern economies, the actors which dominate decision-making over large-scale flows of investment, employment and output are not individuals but corporations. It therefore makes more sense to identify the capitalist class with the set of 'controlling positions' of these corporations. Laterally intersecting family ties may impact how segments of that class interrelate, but are not required for its existence. One upshot of this is that we should not assume the political relationship building that motivates certain interlocks to be an aspect simply of individuals or kinecon groups. Corporations themselves are often cohesive political actors, who form coalitions and allegiances to advance their own well-defined interests—suggesting that political interlocking should shape the inter-firm network directly, rather via the elite network (EN) alone.

In some cases, interlocks may form at the behest of elite individuals seeking to strengthen bonds of class solidarity independent of selfish or particularistic objectives. The kind of class consciousness this implies, however, is typically seen more as product of strong networks and other institutions, rather than a cause of them. Most political interlocks are therefore better understood as tools of *interest group* cohesion. Corporate actors seek overlapping directorates, which facilitate communication and at times formal coordination of political activities, in order to manage contradictory interests and harmonize shared ones. Networked directors may be hired as representatives of other firms, but also as bearers of other forms of political capital such as personal connections to state managers or politicians. Insofar this political capital is correlated with well-boardedness and network reach, the hiring of such directors will tend to reinforce network density and often bolster the inner circle. The class-wide cohesion that this tends to stimulate thus arises as an *unforeseen consequence* of efforts by individual firms and elites to amass political influence.

CNs are thought to contribute to class cohesion through two specific channels: through the fostering of inter-board and inter-personal relationships (Clawson and Neustadtl, 1989; Burris, 2005; Murray, 2017) and through the formation of an 'inner circle' that assumes key functions of class leadership (Useem, 1984; Chu and Davis, 2016; Comet, 2019; Heerwig and Murray, 2019). Useem (1984) found that the main selection criteria for the latter is simultaneous directorship in at least three major firms, which affords a purview beyond any single interest bloc and helps to imbue inner circle members with 'class-wide rationality', while making them appealing to state actors as potential interlocutors. A now well-developed body of empirical work has demonstrated that interlocking increases the likelihood that both firms and individual directors act in similar ways politically—helping to dispel recurring concerns about whether interlocks actually *do* anything (Mizruchi, 1992; Burris, 2005; Dreiling and Darves, 2016).

But recent work within the class tradition of CN analysis has pursued this focus—on *effects* that interlocks have—almost exclusively. This has meant that a burgeoning comparative literature on CN *formation* has come to rely heavily on a narrower version of inter-organizational theory. The main theoretical touchstone for this work has been the firm-centric Varieties of Capitalism (VoC) school (Heemskerk, 2010; van Veen and Kratzer, 2011; Cárdenas, 2012; David and Westerhuis, 2014). VoC holds that dominant patterns of strategic interaction between firms and other economic actors vary according to the institutional structure of the economy. A market nexus tends to prevail in so-called liberal market economies (LMEs), where economic relations are primarily arms-length and competitive. Coordinated market economies (CMEs) feature more direct forms of collaboration and corporatist bargaining. The coordinating system of the economy, in other words, defines the dominant *modality* through which firms manage resource and other interdependencies and thus influences the typology of the network. The key finding of this literature is that networks tend to be more diffuse in LMEs, where interlocks primarily fulfill communicative functions, and denser and more structured in CMEs, where they are more likely to reflect formal coordination or control. Cárdenas (2012) excavates causal relationships using a fuzzy set analysis, and finds three institutional factors, in particular, to be associated with network cohesion: (a) bank-based credit systems, (b) interventionist states and (c) blockholding in corporate ownership.

Intra-class perspectives would lead us to expect that network patterns will also reflect the ways that the capitalist class is organized politically. This will in some part relate to the contingent action of localized interest groups, whose behavior is hard to predict. But the networking decisions of individual firms will also respond in a correlated way to structural forces and broader political dynamics, which will have more 'visible' impacts on the network. At the most basic level, we can predict that trends in intra-class networking will be related to society-wide dynamics of political contention. More cohesive interlocking is likely to occur when business is challenged by other powerful social actors like labor unions or state bureaucracies. When these actors are strong the national political agenda is more likely to feature issues that bear on the collective interests of large groups of corporations—spurring efforts to overcome particularistic concerns and build cross-business unity. Schifeling and Mizruchi (2013) argue that this can help to explain important historical patterns in the USA, like the decline of the dense post-War network. Reagan's watershed election in 1980, they argue, represented a decisive victory for corporate interests over their class opponents which 'reduced ... incentives for executives to connect with one other [sic], resulting in network decline' (2013, p. 39). Windolf (2014, p. 73) makes a similar argument in the German case, arguing that 'the high density of the corporate network at the end of the 1920s may be interpreted as a protective device against an external enemy (the French army) and an internal one (the communist party).'

More directly relevant for our purposes, are various studies that have looked at how CNs have evolved during periods of democratization. Jackson's (2001) long durée study of institutional evolution in Japan and Germany shows that a first crucial factor is how new regimes deal with incumbent elites after political transitions. The purging of fascist-linked business families in the immediate post-War period led to some initial disruption in inter-CNs in those countries, although to a far greater extent in Japan than Germany. However, the weakness of individual share ownership in both cases encouraged corporations to rapidly reestablish extensive cross-holdings, often through collaboration with affiliate banks. The institutions of managerial autonomy and strong financial commitment that this helped to foster then co-evolved with the 'industrial citizenship' rights claimed by a newly empowered labor movement, which reinforced non-market coordination and dense networks.

Zhang and Whitley (2013) see coalitional dynamics as central to the diverging trajectories of network arrangements under simultaneous democratizing and liberalizing pressures in Taiwan and Thailand. In Taiwan, state and business actors reached fruitful compromises in the face of these pressures, with the state allowing for a devolution of coordinating authority to business associations, which led to a shoring up of inter-firm networks. The weaker and less institutionalized coalition in Thailand, in contrast, failed to respond effectively which led to private actors pulling away from collective arrangements and forming particularistic ties with party politicians, thus fragmenting business networks. Stark and Vedres (2012), found that newly corporatized firms in post-Communist Hungary and politicians of new parties sought ties with each other in order to manage competitive forces in their respective fields. The political identities that firms assumed then influenced their own patterns of networking, leading the inter-firm network to reflect the increasing polarization of the party system.

Inter-organizational and intra-class approaches are complementary. In any given CN some proportion of interlocks will originate from inter-organizational imperatives, while others will stem from class interests. The functional role that an interlock assumes is not constrained by its originating motive. Ties intended to manage resource dependencies may end up facilitating political cohesion and vice versa. Indeed, political and economic motives will often be overlapping and hard to disentangle—resource and other economic interdependencies often subtend common material interests among firms and thus simultaneously provide incentives for political coordination. The commercial operations of large firms, moreover, generally require some level of direct coordination with state actors. Whether ties forged to manage these relationships properly originate in either organizational or class imperatives will not be straightforward to determine. The modalities of political networking, therefore, will also be closely related to the institutional structure of the economy. Cárdenas (2016), for example, argues firms in Latin America are especially reliant on direct forms of state support, which necessitates access to high-level government officials. He finds that the presence or absence of encompassing business associations—which control and regularize contact with the state—accounts for much of the cross-national variation in network patterns on the continent.

The foregoing points to a straightforward synthesis of intra-organizational and intra-class theories based on the insight that the complex environments that firms must reproduce themselves in are political as well as economic (Mizruchi, 1992). In the longer term at least, survival depends not only on ensuring that the firm has immediate access to vital resources, but that trends in legislation and policymaking foster conditions conducive to ongoing profitability. The remainder of this paper applies this synthesis to a historical analysis of the CN in post-Apartheid South Africa.

3. Historical background: liberalization and democratization in South Africa

While there don't appear to have been any direct attempts to locate Apartheid political economy within a comparative capitalism's frame, it seems to have shared important features with the 'Hierarchical Market Economies' (HMEs) that Schneider (2009) identified in contemporary Latin America. Most important here is the prominence of diversified, family-controlled business groups. Group domination of the economy was a direct a legacy of the origins of South African capitalism in diamond and gold mining, the technical and financial conditions of which encouraged rapid concentration and centralization. The down- and up-stream linkages of the mining sector heavily shaped early industrialization, which provided conglomerates with avenues for diversification and expanded their hold over their economy. Both mining and manufacturing were dominated by English capital in earlier periods, but Afrikaner conglomerates made strong inroads into those sectors under state stewardship, following the 1948 victory of the National Party (NP).

In Fine and Rustomjee's (1996, p. 160–161) seminal analysis, a crucial juncture was reached at the end of the 1960s when intensified directoral interlocking and cross-shareholding eroded the 'historic disjuncture' between the two ethnic wings of large-scale capital, paving the way for the consolidation of a 'Minerals-Energy Complex' (MEC). The MEC, made up of the dominant six business groups and closely linked state agencies and enterprises, formed the core of the dominant 'social bloc' under Apartheid—a cross-sectoral coalition whose interests were most prominently expressed in, and served by, the prevailing growth regime and institutional framework (Baccaro and Pontusson, 2022). The MEC was tightly entwined with finance, notably through collaboration with dominant British banks in the creation of a merchant banking sector in the 1950s, which 'reinforced the close connection between finance and industry' and spurred a burst of merger activity, deepening the centralization of the economy (Ashman *et al.*, 2013, p. 161). Capital markets were small during earlier phases of development but grew more rapidly from the 1960s onwards. However and tax and regulatory incentives tended to channel household savings towards the large retirement and insurance funds which were themselves imbricated in the group system, meaning that no real market for corporate control ever emerged (Kantor, 1992).

Corporate and political leadership in Apartheid South Africa is frequently described as an 'Old Boys Club' with dense social and familial ties integrating the different power centers of the elite. Originating families of the business groups played a direct role in governance, overseeing a norm of 'gentlemanly agreements' that limited competition between MEC interests (Padayachee, 2013). While Afrikaaner capitalists enjoyed stronger personal connections to the political class, the heavily interventionist policies of the Apartheid state—another feature shared with HMEs—tended to work in favor of the collective interests of the MEC groups, allowing them to project an extraordinary degree of control over the whole economy. By the early 1990s, they accounted for around 84 percent of the total value of the JSE (Table 1).

Table 1 Firm statistics

	1993		2005		2018	
	N top 125	% total JSE	*N* top 125	% total JSE	*N* top 125	% total JSE[a]
Control						
MEC	94	84	24	35.5	17	13.7
Anglo American	32	38.2	7	17.3	2	3.6
Liberty	5	4.7	2	4.3	1	2.1[b]
Anglovaal	6	2.9	0	–	0	–
Sanlam	18	12	2	1.6	2	1.3
Old Mutual	16	10.7	4	4.5	1	1.9
Rembrandt Group	13	15.5	9	7.8	11	6.9
Multiple MEC	4	–	0		0	
Non-MEC	31		101		108	
Other firms	10		9		20	
Institutional investor(s)	3		58		57	
Directors	6		8		12	
Individual/family	10		18		15	
Other	2		8		4	
Avg market cap sector	R5,073,354,868		R23,608,129,082		R106,106,285,919	
Manufacturing	43%		30%		27%	
Mining	29%		16%		14%	
Service	5%		14%		18%	
Finance[c]	15%		20%		20%	
Other	8%		20%		18%	

Note: JSE share and control assessment taken from WOW reports.
[a]Figures are for 2015.
[b]Figure is for 2015.
[c]Max 20 by construction.

Underpinning the social order of Apartheid was an intricate system of authoritarian social control targeting the black majority, a core imperative of which was to secure reliable supplies of low-cost labor. The centrality of a repressive labor regime is a final way in which the Apartheid economy parallels other HMEs (although labor systems in Latin America tended to be more decentralized). But while central to the growth regime of Apartheid capitalism during its earlier phases, the labor and urbanization policies of Apartheid became an increasing source of tension within the dominant social bloc as the labor needs of more advanced industries evolved, requiring a more skilled and stable workforce. The ratcheting up of those tensions, the fallout from harsher sanctions and most importantly differing views about how to respond to a more assertive labor movement and democratic opposition eventually split the ruling coalition in the latter half of the 1980s, with some MEC conglomerates preemptively declaring their opposition to Apartheid.

An understanding of why institutional transformation was so far-reaching after 1994 must advert firstly to configurations of power resources and interests that shaped social conflicts through the transition and determined their outcomes. Key to account for is why dominant MEC leaders themselves abandoned old institutional models. This appears to have been, indirectly, a response to the radically new political environment ushered in by democracy. Notwithstanding their success in building bridges to key ANC elites, and in heavily influencing the negotiated transition, corporate leaders still entered the democratic era facing political uncertainty and risk of a novel scale. Demographic realities left historic white parties permanently barred from power. The ANC's dominance of the electoral arena was totalizing. Despite compromises at the top, most of its base, its coalition partners on the Left, and the newly enfranchised black majority more broadly remained wedded to muscular forms of redistribution and expropriation as tools of democratic nation building.

Internationalization became central to business' defensive strategy in this context. In the global opening of the economy, MEC leaders saw an opportunity to move wealth abroad, reduce exposure to the volatile domestic environment and restrain the ANC's redistributive impulses by subjecting future governments to the discipline of international financial markets (Ashman *et al.*, 2011). Yet they also understood that many of their own lower-tier subsidiaries, which had suffered decades of underinvestment in managerial capacity, would not survive the end of state protection, and that diversified conglomerate models were in general unsuited to a new era of international competition. Controlling families thus embraced radical restructuring as a concomitant to liberalization, shoring up and off-shoring core enterprises in which their wealth was embedded while unbundling and exiting from secondary lines of business (Zalk, 2016). Their ability to do so was facilitated by the hierarchical form of corporate power which muted opposition from the many constituencies that stood to lose from globalization.

Concerted pressure from a largely unified domestic business class was the decisive factor in diverting the ANC from its historic commitment to dirigist social democracy, towards an embrace of neoliberal macro policies (Padayachee and Niekerk, 2019). But the pivot to laissez-faire did not imply the simple abandonment of the party's ambitions for the racial transformation of the economy. Those ambitions were instead reconfigured to fit the contours of marketized governance. The ANC added further pressure to the breakup of the MEC conglomerates and looked to a more competitive domestic market to provide avenues for the growth of a 'patriotic' black business class, which in turn would help shift the country to a more inclusive industrialization path.

Inherited institutional legacies also shaped the terrain on which these political processes unfolded, as we've seen in other contexts of democratization. In post-war Japan and Germany, for example, Jackson (2001) shows how the demands of newly empowered unions for stronger representation within the firm built on longstanding paternalist traditions of labor management and helped to inscribe new forms of 'industrial citizenship'. Lacking any similar history of firm-level entitlements, labor's experiments with codetermination in democratic South Africa were ultimately fleeting and unsuccessful. Influenced by the industrial council system of the 1980s, that had been imposed by Apartheid reformers to try and stem the shopfloor power of the growing union movement, labor organizations instead looked to corporatist formulas to safeguard their interests (Lichtenstein, 2019). COSATU pushed for a strong centralized bargaining, a highly regulated labor market and backed the creation of the National Economic Development and Labour Council (NEDLAC) which provided a permanent forum for business–labor–state (and eventually community) negotiations over major policy issues.

Labor's focus on state protections rather than firm-level rights left business with a relatively freer hand in reimagining corporate governance frameworks, in line with an increasingly internationalist orientation. The diffusion of an archetypically Anglo model of governance to South Africa, for which the business-backed King I (1994) and II (2002) commissions were the key vehicle, partly reflected the commercial and personal ties that English capital retained with the metropole. Notwithstanding gestures to 'Ubuntu' (communal) values, the King guidelines were underpinned by clear principles of shareholder primacy. They strongly limited stakeholder participation while also seeking to roll back a 'big man' culture by limiting joint Chairperson-CEOships and expanding the role of independent directors and sub-committees (Padayachee, 2013). Importantly for our purposes, King II (p. 26) enjoined directors to 'carefully consider' their own capacity constraints when deciding on outside board appointments but did not set hard limits on the amount number of directorships an individual could hold.

Equally sweeping reforms occurred in the financial sector, and helped to push forward corporate restructuring. Major banks gained their independence from business groups and also aligned quickly with Anglo business models, pursuing consumer lending and internationalization. Capital markets, which were previously heavily regulated and shielded, rapidly internationalized. This was another important channel through which institutional legacies shaped the trajectory of transformation. South Africa's deep and efficient stock market attracted a massive inflow of foreign institutional funds, which rapidly transformed ownership structures and accelerated group unbundling and the transition to shareholder primacy. South African firms are now among the most equity-driven the world with total market capitalization on the JSE equal to 352.8 percent of GDP in 2017 (more than five times higher than the average for upper middle-income countries).

A dramatic transformation in the structures of business and finance was therefore witnessed from the mid-1990s onwards, which is likely to have inflicted strong fragmentary pressures on the CN. The Apartheid economy was characterized by (a) high blockholding, (b) state interventionism and (c) a financial system which, while not strictly 'bank-based', encouraged long-term, non-market creditor relationships—all features found to be associated with dense CNs (Cárdenas, 2012). The hierarchical and club-ish nature of corporate leadership in this period suggests the presence of a substantial inner circle, which is likely to have further added to density and to multiplicity (the frequency of 'thick ties' involving two or more directors, usually associated with control relationships). Liberalization led to the unbundling of groups and the dispersal of firm ownership, the widespread diffusion of shareholder norms, the growing influence of the capital market and the de-linking of banks from group control. The market nexus, rather than the control structures and personalized relationships of the dominant families, became the main coordinating mechanism of the economy—all of which suggests that the CN would have been restructured from a dense to a more diffuse typology.

Accounting for the *political* sources of network formation, however, leads us to modify this hypothesis considerably. Democratization is likely to have created strong incentives for political interlocking through two main channels. The first relates to the broad dynamics of class contestation, already touched on above. The negotiated settlement which ended Apartheid ushered in a social contract broadly favorable to large-scale capital, but one that remained fragile because of the empowerment of labor and other popular sectors whose interests were not well represented in the emergent neoliberal regime. While the ANC acted effectively to contain popular pressures for redistribution, it was subject to its own internal dynamics of contestation—witnessed for example in the 2007 ouster of the neoliberal Mbeki faction by a left-wing coalition.

In short, capital faced powerful adversaries in the democratic period, capable of not only changing the policy agenda but of challenging systems of governance and property. This will have created strong pressures within the corporate community to maintain broad cohesion across different sectoral concerns—reflected in the construction of powerful encompassing business associations and lobbying groups like Business Unity South Africa. According to one increasingly influential interpretation, the main constellation of interests within the Apartheid social bloc continued to act as a relatively unified social force and to exert a decisive influence of the democratic state. Ashman et al. (2013) argue that unbundling and the transformation of corporate control resulted not in the disintegration of the MEC but in its reconfiguration along more globalized and financialized lines.

A dominant 'social bloc', however, is almost never comprised solely of economic interests. Structural power alone is rarely sufficient to drive complex political agendas, meaning that business coalitions rely on direct linkages to state and party actors to organize their power in governing institutions. In South Africa, democratization had produced a bifurcated elite sphere, with economic and state power divided between two social groups with long histories of antagonism and almost no social, cultural or organizational bridges between them. Eschewing calls to establish a neutral bureaucracy, the ANC pursued a 'liberationist' approach to the state, viewing the machinery of government as an instrument to be captured, transformed and wielded in a project of social re-engineering (Fredericks and de Jager, 2022). It sought direct control over all levers of power through a policy of 'cadre deployment' which rapidly blurred the boundaries between party and state.

While the new party-state retreated from nationalization, it maintained a strong hand in the economy through tight regulation of industry and labor, expansive welfare programs and the coordination of several major state-owned enterprises which played key roles in transport, energy and communications. For this reason, despite the thoroughgoing Anglo-Saxonization of its business and financial institutions, most observers refrain from classifying contemporary South Africa as a liberal market economy, seeing instead a mixed institutional structure that does not map neatly onto any major global variety. Nölke and Claar (2013) see parallels between South Africa and 'state-permeated market economies' such as Brazil and China, notably due to the importance for economic governance of 'close cooperation between public authorities and major businesses, based on informal personal relations'. Similarly, in a cluster analysis, Fainshmidt (2018) locate South Africa alongside other 'emergent LMEs', characterized by liberalized business systems but high levels of state interventionism, particularly of a regulatory kind.

Thus while the market increasingly interceded in inter-firm relationships, direct coordination with an activist yet partisan-dominated state remained imperative for large firms. At the same time, few channels for official engagement between state managers and business leaders existed, particularly following the decline of NEDLAC as an effective forum for tripartite deliberation. All of this underscored the urgent need for businesses to establish direct personal and organizational ties to the new political elite. Beyond helping to manage political uncertainties and influence policy within their direct sphere of interest, corporate leaders appear to have grasped a wider class imperative at stake in the re-integration of elite spheres. The promotion of high-profile, politically connected black business leaders would help to legitimate the market economy both at a popular level and within the ANC elite, and provide a bulwark against more radical forms of redistribution (Tangri and Southall, 2008).

This explains the initiative that white business took in launching an initial 'informal' stage of Black Economic Empowerment in the early 1990s, involving subsidized equity buy-ins and directorships offered to politically connected black business people. The pace of transformation during this voluntaristic phase of BEE remained slow, however, and quickly became a source of widespread frustration. As Mbeki's right-leaning faction consolidated its hold over the ANC, it was able to articulate a more forthright strategy of black capitalist class formation as a central pillar of its transformation agenda—shifting agency from business to the state. In 2003, the Broad-Based Black Economic Empowerment Act of Parliament was passed, establishing a legal framework for BEE centered on the use of transformation 'scorecards', enforced through procurement contracts and other incentives. Critics generally agree that despite the new moniker, BEE remained elite-oriented, focused on opening up avenues for capitalist advancement rather than challenging racialized class disparities (Tangri and Southall, 2008).

Thus, much as Stark and Vedres (2012) found in post-communist Hungary, the re-formation of ties between business and political elites was a mutualistic process pursued by both sides for distinctive reasons. But whereas in Hungary the duopolistic party system meant that ties formed on a partisan basis, creating a network with 'holes', in South Africa, EN ing occurred between a relatively cohesive corporate sector and a dominant party, meaning that it is likely to have been more integrative. In effect, both sides sought the creation of a new inner circle—a political 'leading edge' of the business class, comprised of well-networked black directors that could mediate between the democratic state and historically white corporations.

The main conclusion of this background, therefore, is that liberalization and democratization are likely to have had broadly opposing effects on the CN. The tumultuous transition from a group-dominated, hierarchical business system to one modeled on Anglo-Saxon lines is likely to have fractured the network and diminished interlocking. On the other hand, the political pressures faced by business in the democratic environment, and the imperative of re-forging connections across economic and political spheres of the elite, are likely to have been spurred for cohesive networking. Rather than a unilinear trend of fragmentation, which would be predicted by narrow organizational theories of interlocking, a synthesis of class and organizational approaches leads us to predict a process of network *remaking*, in which the uprooting of the old network facilitates the growth of new cohesive sub-structures. The next section describes the methods through which this hypothesis will be tested.

5. Methods

Director networks have an affiliate structure in that directors are tied to each other via their participation on boards. The analysis here focuses on the one-mode projection of the director network into a network of firms, which is what I have referred to as the CN, although reference is occasionally made to the one-mode projection of directors, the EN. The analytical approach here is divided into two parts. The first adopts a historical lens, tracing structural changes in the CN from just prior to the transition (1993) to the recent period (2018). I focus here on the changing typology of the network at a macro level, paying close attention to key structural variables such as density and multiplicity. Density is a common measure of cohesion, defined as the ratio of actual to possible edges. Multiplicity is the proportion of total interlocks that involve more than one director. Thicker edges of this kind are more likely to convey relationships of control or coordination than simply 'business scan'.

It is at the macro-structural level that I expect to observe changes in the network emanating from corporate institutions and coordinating mechanisms. In order to anchor these observations in a clear frame of reference, this part of the analysis also locates South Africa in a comparative international context, drawing on a now extensive literature on CNs under globalization. At a more meso-level, I examine the evolving sub-networks of the MEC firms. I expect these to have had a strong influence on the network in the pre-democratic period, when hierarchical group forms were dominant, and to have declined somewhat since. Signs of persistence in intra-MEC ties, however, might be an indicator of political interlocking and of the continuation of the MEC as a 'social bloc'.

The second part of the analysis examines how racial elite formation has affected the structure of the contemporary network. I ask two broad questions. Firstly, is the CN racially integrated? The hypothesis above, that white directors sought to empower a section of the black elite as political allies and interlocutors, implies a higher degree of integration. Conversely, segregation is likely to have ensued if, as some contend, revanchist white elites conceded to only a fig leaf of transformation while continuing to hoard power. That would have forced aspirant black directors to have relied heavily on the foothold gained by earlier entrants in order to secure positions, leading to racial clustering.

I measure the racial integration of the CN at two levels. Firstly, board composition. I calculated an Index of Dissimilarity (IoD), a common measure of segregation in geography and neighborhood studies (Cornwell and Dokshin, 2014), as

$$D = \frac{1}{2}\sum_{i=1}^{n}\left|\frac{b_i}{B} - \frac{w_{\mathrm{i}}}{W}\right|$$

where b is the number of black directors on board i, and B is the total number of directorships held by all black directors (their total number of ties to boards); w and W are the same for whites. The IoD can be interpreted as reflecting the proportion a group that would need to be reallocated in order for the racial composition of boards to be completely evened out. If IoD is 1, boards are completely segregated whereas if IoD is 0, the racial composition of every board precisely reflects the racial composition of the population. Second, I measure segregation at the network level by calculating the assortativity coefficient (AC) which measures the correlation of a selected characteristic between nodes that are connected—in this case, racial composition. The AC is 1 with perfectly assortative and tends to 0 where mixing is random.

The second question I ask is whether the hiring of black directors has reinforced cohesion? A first-pass answer to that question could be gleaned by examining the centrality of black directors in the network and their representation in the inner circle of directors with three or more board seats. Of course, a 'true' inner circle is defined by a position of political leadership that typically derives from, but is not reducible to, well-boardedness or network centrality. I do not try to conclusively establish whether well-networked directors in South Africa assume this role—but some evidence on whether they do can be gleaned by leveraging a variable on whether a director is, or was, a 'politically exposed person' (PEP). A high level of political exposure in the inner circle will also insulate the results against a concern that black inner circle membership derives, perversely, from tokenism. This may be the case if the perceived or actual pool of black candidates suitably qualified for top directorship is limited, incentivizing corporations concerned about BEE credentials to offer repeated appointments to the 'usual suspects', as Padayachee (2013) terms them.

A more robust way to test whether elite formation has contributed to cohesion is to regress firm degree centrality on the percentage of black or PEP directors, controlling for important covariates. This provides a sense of the contribution of elite formation to the frequency of interlocking (e.g. see Naudet and Dubost, 2016, p.421). However, it may not be the best approach to examine cohesion simply in this aggregate way, since typology may vary across the network, allowing for the existence of more cohesive substructures, including a network core.

One approach for defining and locating cohesive substructures is suggested by Moody and White (2003; and see Benton 2016 for a recent application to CNs). Formally, they define a *k*-component of the graph as a group of nodes, for which *k* is the minimum number of nodes that would need to be removed in order to split the group into one or more components. A component is defined by a unique path connecting each node in the set. Non-intuitively, in a *k*-component, each pair of nodes is connected by *k* node-independent paths. Describing cohesiveness of a graph in terms of its *k*-connectivity thus satisfies certain intuitive properties of cohesiveness—including robustness and a multiplicity of avenues for the passage of information and influence.

Moody and White (2003) outline a 'cohesive blocking routine' that detects more cohesive sub-structures of a network, typically revealing a nested pattern, in which smaller more cohesive *k*-components are located within larger more diffuse ones. Here I apply Moody and White's method with the particular objective of identifying a cohesive core to the CN. I then run a probit regression to determine whether the number of black or PEP directors on a firm's board predicts membership within this core, once again controlling for important covariates.

6. Data

In order to provide for maximal comparability, for the first part of the analysis, I follow a convention established to facilitate comparative study by restricting the sample to the largest 125 publicly listed firms measured by market capitalization (Stokman *et al.*, 1985, David and Westerhuis, 2014). Financial firms were restricted to 25 with the remainder made up of non-financial firms (only in 2018 did this condition result in substantial changes to the final sample). Several foreign headquartered property firms which have secondary listings on the JSE but no actual employees in the country were excluded from the 2018 sample. Data on firm characteristics and ownership were obtained from the online database and the 1993 printed report of Who Owns Whom (WOW)—a private company that has conducted research on ownership and control in South Africa since 1980. Data on ultimate control was also taken from WOW reports. Table 1 presents descriptive statistics of firms.

Director names for 1993 were obtained from the WOW report of the same year. The report only contains initials of first names, and since the data is now almost three decades old, the full names of individuals were hard to verify. This is likely to result in a small number of spurious interlocks in the dataset, arising from different individuals who share a surname and initials, although such cases are likely to be rare. In order to obtain full names and images of directors, annual reports rather than the WOW database were used for 2005 and 2018. Online searches, particularly relying on director data at *www.bloomberg.com* were used to confirm that interlockers were in fact the same individual.

For pre-2020 neither WOW nor annual reports report the race of directors and a small fraction of directors has missing race information in the 2020 dataset. In these cases, I was forced to impute race using images and names. In about one-quarter of cases in 2005 around 10% in 2018 images were not available, and thus race was imputed based on name alone. Since racial divisions in South Africa typically coincide with linguistic divisions this procedure is likely to fairly safe.

For 2020, the WOW database defines a director as PEP if they currently or have previously occupied a position in government or on the board of any state-linked entity. The latter includes national and local government structures, state-owned enterprises and state-advisory boards. Biographical data on big connectors for other years was collected through online searches and included personal websites, curriculum vitae, news reports and career information from various corporate databases. However, since such data may be incomplete, and since I lacked a full list of state-linked entities used to define political exposure in the 2020 data, I refrain from explicitly coding 2005 directors as PEP or not.

7. Findings

7.1 The evolution of the CN during democracy

Table 2 compares the structural characteristics of the South African CN with other small and medium economies studied in the various contributions to David and Westerhuis'

Table 2 International comparison

	1990s			2000s			2010s		
	N	Density	Multiplicity	*N*	Density	Multiplicity	*N*	Density	Multiplicity
Small/medium economies									
South Africa	125	0.107	43%	125	0.061	19%	125	0.04	13.37%
Bulgaria	125	0.003	9%	125	0.003	75%			
Switzerland	100	0.071	18%	100	0.040	11%			
The Netherlands	125	0.048	11%	110	0.039	5%			
Portugal[a]	125	0.012	57%	125	0.017	39%			
Argentina	127	0.022	13%	125	0.022	4%			
Austria	125	0.044	30%	125	0.027	32%			
Finland	87	0.044	0%	100	0.029	0%			
Mexico							86	0.084	38.68%
Chile							90	0.040	30.87%
Peru							90	0.028	50.45%
Brazil							90	0.018	28.85%
Columbia							90	0.015	31.46%
Large economies									
Japan	250	0.003	2%	250	0.021	3%			
Germany	252	0.096	24%	251	0.030	81%			
Taiwan	220	0.077	41%	330	0.050	1%			
USA	250	0.072	10%	250	0.041	0%			
France	252	0.099	19%	250	0.053	17%			
UK	251	0.015	3%	247	0.016	11%			

Sources: David and Westerhuis (2014); Cárdenas (2016); author's calculations.
[a]2000s data are for 2010.

(2014) and Cárdenas (2016). The pre-democracy CN had density far higher than any comparable economy. Although the comparison with larger economies (with 250 firms in the sample) is not straightforward, Table 2 provides a loose indication that South Africa was closer to coordinated forms of capitalism like Germany and France. Also significant is the prevalence of thick ties—of other reasonably dense networks only Taiwan, another group-dominated economy, showed any equivalence in the incidence of interlocks involving two or more directors (multiplicity).

Figure 1 presents the CN comprising the 125 largest firms in 1993, with nodes colored according to business group affiliation. The dominant position of MEC groups in the network, and their effect on its overall typology is clearly visible. Clusters detected using multi-level modularity optimization (based on Blondel *et al.*'s, 2008 method) are shown by shaded regions. These group nodes with a high frequency of mutual edges relative to their ties with other parts of the network, and are seen to overlap strongly with MEC groups—showing that the group structure of the economy strongly conditioned the overall typology of the network.

An even clearer exposition of the group structure is obtained by restricting the network to edges with a multiplicity of two or higher (referred to henceforth as the two-core network) (Figure 1, RHS). The graph clearly displays what Fine and Rustomjee (1996) described as the six major 'axes' of South African capital, each represented by one of the MEC groups. Extensive, multiplicitous edges suggest that conglomerates engaged in strong internal coordination and control and were not merely 'portfolio groups'. Parent firms, and larger firms more generally, tended to have higher centrality in the network (Figure 4). Another noteworthy feature of the graph is position of the major banks (labeled nodes)—which occupy bridging spaces *between* the major groups. This is reminiscent of patterns of 'financial hegemony' found historically in Anglo-Saxon economies (Mintz and Schwartz, 1985), in which banks become meeting points for a cross-section of the corporate elite.

The EN reflects a similar degree of centralization. A large proportion of overall density is attributable to a sizeable inner circle of 121 directors, comprising around 10% of the total population of large company directors (Table 3). Between them, they represented almost all—116—of the companies in our sample and were responsible for 577 interlocks. But even further stratification is observable within this group—at the very pinnacle of the network were 40 'super-connectors' who sat on five or more boards, including 11 individuals who held between 9 and 15 directorships among the top 125 firms. This group comprised most of the ultimate family owners of the MEC firms.

The pre-democracy CN, therefore, stands out for an extreme degree of cohesiveness and multiplicity—consistent with the hierarchical nature of the economy. Rather than revealing simply lines of communication and information sharing, the corporate and ENs in this setting appear to offer a detailed map of power within the business system, with their central regions dominated by MEC parent companies and their super-elite family controllers. The latter appear to have enjoyed a scope of influence comparable to the tycoons of money trusts like JP Morgan, who first sparked an interest in interlocks during the US's Gilded Age.

As Table 3 suggests, the CN underwent significant fragmentation in the post-Apartheid period, the bulk of which occurred in the first phase of our sample, between 1993 and 2005, when density declined from 0.11 to 0.06. The de-conglomeration of the MEC contributed to this through two channels: first through the dissolution of subsidiaries or their consolidation into new entities; and second through a reduction in interlocks among surviving firms (though this varied strongly among groups). By far the most significant source of network

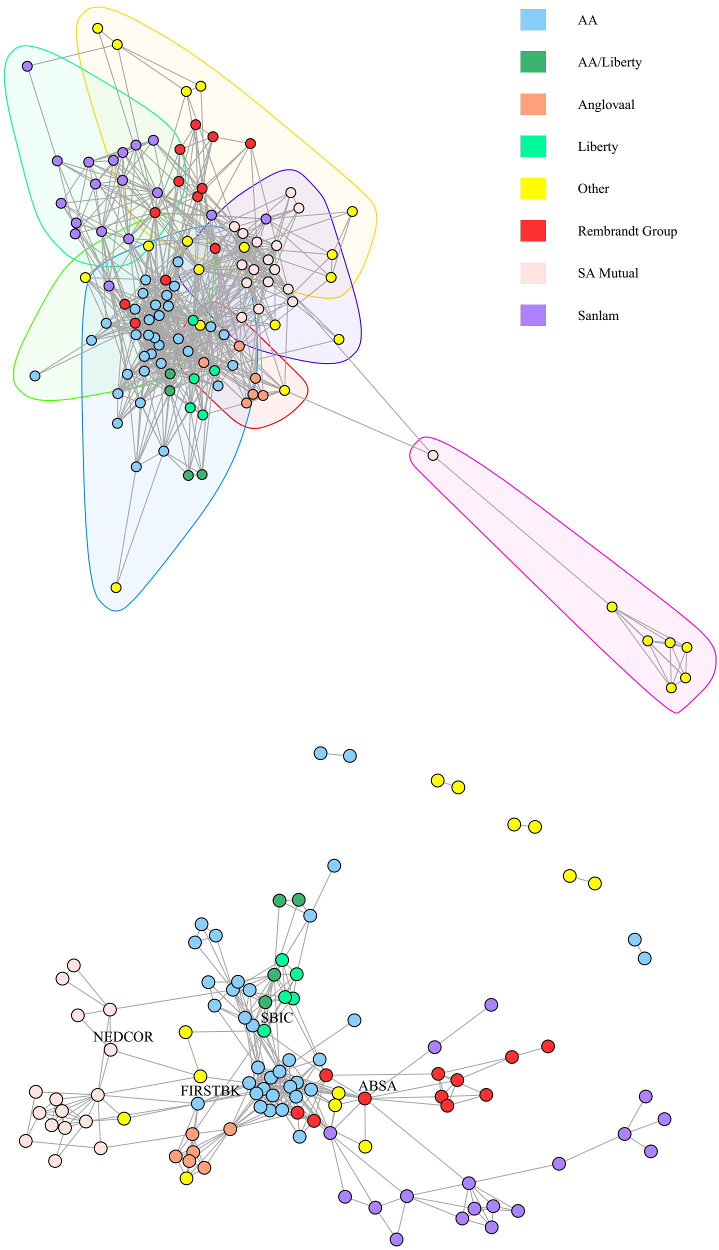

Figure 1 Top 125 firms (top) and two-core (bottom) CN 1993. Shaded regions represent clusters derived from modularity optimization. Two-core is the network of edges with multiplicity 2 and higher. Labeled nodes are major banks.

Table 3 Network statistics

	1993	2005	2018
General			
Number of components	7	15	14
Size of main component	118	111	111
Number of isolates	5	14	12
Number of marginals	6	11	19
Number of ties	842	474	344
Number of multiple ties	359	90	46
Size of two core	115	78	51
Density (full network)	0.11	0.06	0.04
Density (main component)	0.12	0.08	0.06
Centrality			
Avg distance (main cmp)	2.76	2.78	3.06
Avg degree (full network)	13.47	7.58	5.50
Avg degree (main cmp)	14.25	8.54	6.18
Avg closeness (full network)	0.000782	0.000437	0.000431
Avg closeness (main cmp)	0.003026	0.003228	0.002956
Avg betweeness (full network)	95.83	85.84	98.97
Avg betweeness (main cmp)	101.52	96.67	111.45
Directors			
Number of directors	1041	1103	1173
Number of interlockers	261	219	182
Number of big connectors (3+ board seats)	121	80	64
Number of super connectors (5+ board seats)	40	13	7

Notes: General and centrality statistics are based on the CN of the top 125 firms (one-mode projection of firms). Director stats are based on the bi-partite network.

fragmentation in this period was attrition in the population of large firms, a feature of the economic restructuring triggered by the transition. In total, only 54 corporations survived wholly or mostly intact in the top 125 list between 1993 and 2005. Mining was particularly affected—almost half of the largest companies disappeared between 1993 and 2005, and the average degree centrality of those that remained sunk to almost a third—6.05. Overall, new entrants had a degree centrality less than half that of survivors.

In fact, turnover in the population of large firms appears to have been responsible for almost all of the loss of cohesion. The density of the sub-network of surviving firms actually *increased* over this period. In other words, older more established firms, most of which (77%) were former or ongoing affiliates of MEC groups, increasing the number of interlocks they held with *each other* (from 158 to 171), even while the wider network was undergoing massive fragmentation. Most (114) of the dyads in this survivor sub-network were newly constituted, although the internal networks of former groups reveal surprising continuity, even in some instances where ownership ties had been severed (Figure 2). These results provide support for theories of MEC-persistence. The ongoing cohesion of the MEC core gave the 2005 network a pronounced center-periphery structure.

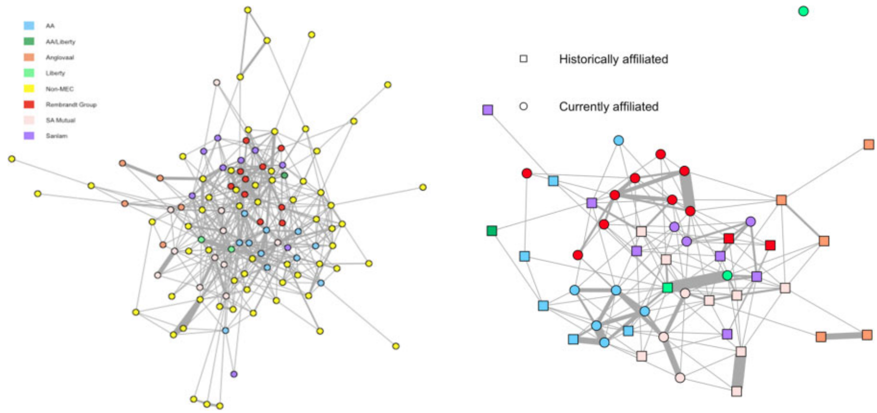

Figure 2 Top 125 (LHS) and MEC (RHS) networks 2005.

Notes: MEC firms are characterized as historically affiliated if they were formally but no longer controlled by group parents.

Churn in the population of big firms was far lower between 2005 and 2018, with 75 firms remaining fully or largely intact. This time, however, the sub-network of survivor firms failed to retain its overall integrity. Its edge density decreased from 0.087 to 0.059. This period also saw a more comprehensive thinning of the MEC networks, consequent of their further de-conglomeration (Figure 3). Among the 23 firms whose main activity was in an MEC core sector (mostly mining), there were just 11 edges. Banks also relinquished their formerly prominent role. Where network centrality had previously been an appurtenance of the size and prestige of a firm, by 2018 this was no longer the case (Figure 4).

Overall density in the network sank by a further third from its 2005 level to 0.04 in 2018. Although the majority of firms still remained connected to the main component of the CN, the number of isolates and marginals grew to almost a quarter of the population of large firms. MEC continuity is thus found to be largely limited to the first period under investigation, while over the full span of time fairly extensive fragmentation took hold. By 2018, the South African CN was located more towards the liberal end of the cohesiveness spectrum (Table 2). However, it still remained noticeably more cohesive than other liberal economies, despite the extent of Anglo-Saxonization in business and financial institutions. Patterns of elite formation, which we examine next, help to account for this.

7.2 Elite formation and cohesion in the 2020 CN

Table 4 reports descriptive statistics on race for the 2005 and 2020 networks. As expected, the data show a gradual pace of racial transformation—by 2005 blacks comprised slightly over one-fifth of directors and a smaller proportion of executives. They made up a roughly similar proportion of interlocking directors, including 19 who joined the ranks of the inner circle. WOW reports do not provide data on political exposure for this period, but biographical data accumulated through online searches shows clearly the importance of political capital in determining entree into this elite grouping. Almost half of the black inner circle possessed bonafide ‘struggle credentials’ having been well-known leaders in the anti-Apartheid movement. Many of the remainder have become high-profile public figures

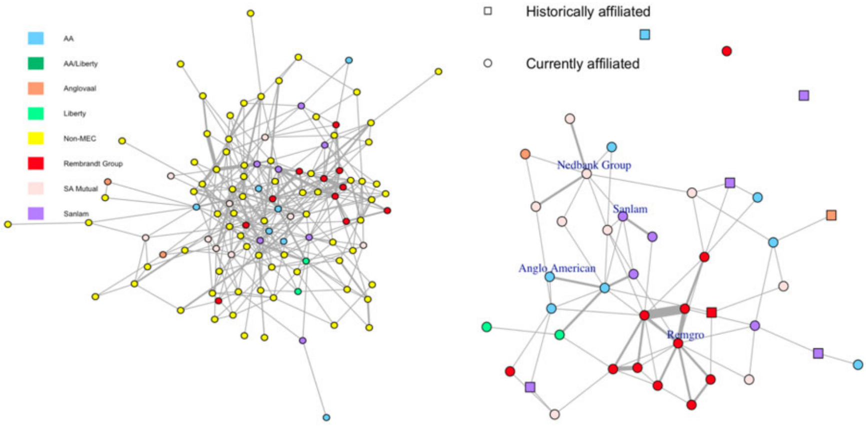

Figure 3 Top 125 (LHS) and MEC (RHS) networks 2018. MEC firms are characterized as historically affiliated if they were formally but no longer controlled by group parents.

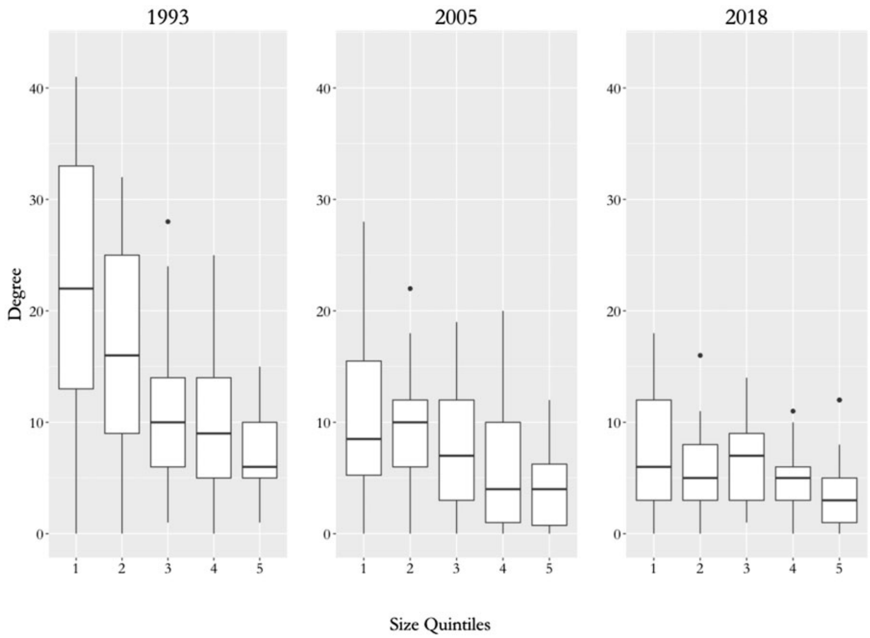

Figure 4 Size and degree centrality 1993–2018, top 125 firms.

subsequently, and are known through extensive media profiling to enjoy connections to the top of the political chain. The list includes all of the so-called 'Fab Four', who became icons of the new economic black elite in the early democratic period, and whose most famous member is the current president (Cyril Ramaphosa). The Fab Four were all ANC heavyweights before entering the corporate sector (Southall, 2016, p. 93).

Table 4: Director race statistics

Race	Total directors	Executive	PEP	Interlocker	Inner circle	Avg boards	Avg degree
2005 (Top 125)							
Black	243	41		36	19	1.38	16.78
White	858	386		103	61	1.32	14.79
2020 (Top 125)							
Black	359	67	117	60	23	1.31	14.35
White	561	191	23	48	16	1.15	12.24
2020 (Full CN)							
Black	748	154	191	103	78	1.41	13.00
White	1339	557	44	108	48	1.17	10.29

Notes: Inner circle is directors with 3 or more board seats. Degree is derived from EN.

By 2020, black directorship grew to almost 40% of the top 125 firms and around 35% of the entire corporate sector (283 firms), although blacks remained underrepresented in executive positions. The data reflect the racial concentration of political capital in the democratic period—of 235 ‘politically exposed’ directors in the population, less than a fifth were white. The most significant shift from 2005 concerned interlocking directors, and particularly the inner circle. While the number of white members of the top 125 inner circle dropped precipitously, black membership increased slightly. The full CN reveals that a somewhat larger inner circle persisted despite liberalization, which by 2020 was strongly dominated by black directors. The majority of these (55%) were politically exposed, suggesting that this was not simply an artifact of repeat appointments offered to the ‘usual suspects’.

Figure 5 plots the distribution of firms by the number of black directors on their boards. In 2005, blacks comprised around a fifth to a quarter of directors in most firms, and were a majority in only a small handful of cases. The IoD for that year was 0.38 against a predicted 0.22, suggesting that only 16% of black directors would need to have been reallocated in order to arrive at a more or less random racial distribution. Between 2005 and 2020 top boards became somewhat more integrated, with the IoD declining to 0.28 (for the full CN it was slightly higher, 0.36). By this stage, 99 firms had majority black directorship, and a further 112 had between a quarter and 50%. The AC for Top 125 firms was very low, and moderate for full CN. On the whole, the data appears to support a fairly high level of racial integration within the corporate elite.

Figure 6 displays the results of a cohesive blocking routine applied to the full contemporary network. It shows, in a familiar pattern, a nested structure with more cohesive blocs embedded in larger more diffuse ones. At the deepest level of the network is a large, cohesive grouping of 59 firms with a *k*-connectivity of five (B18), meaning that each node within this group is connected by at least five node-independent paths. I classify this grouping as the network Core. It is nested with a larger substructure comprising 111 firms in total, 6 of which form a distinct five-connected sub-group. I classify all non-Core members of this substructure the Near Core. All other firms with an interlock, all but two of which are connected to the main component of the network, are termed Non-core. This includes a few more cohesive sub-groups of 4–6 *k*-connectivity but which are more distant from the Core, alongside a broader periphery of less

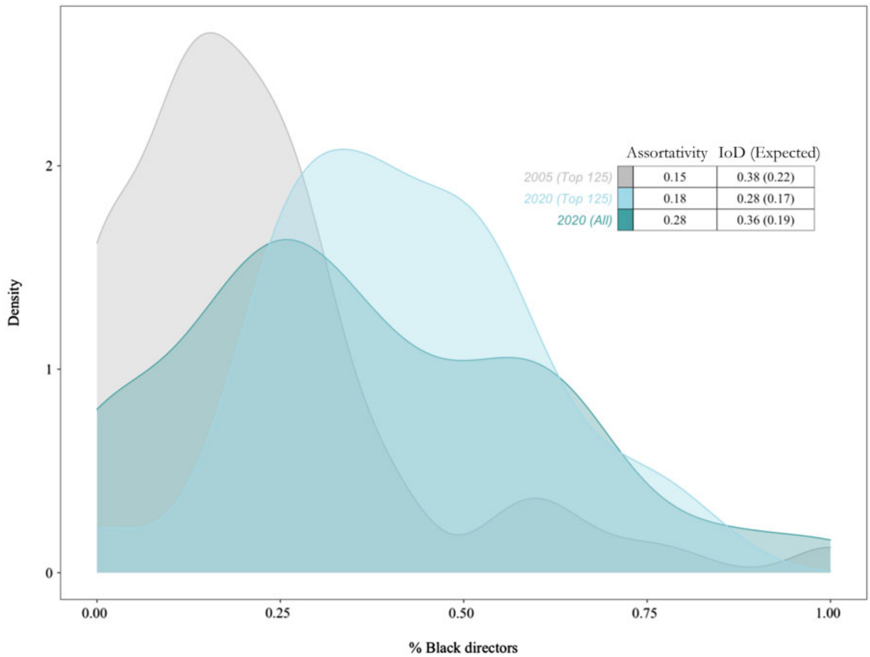

Figure 5 Racial composition and integration of boards 2005–2020.

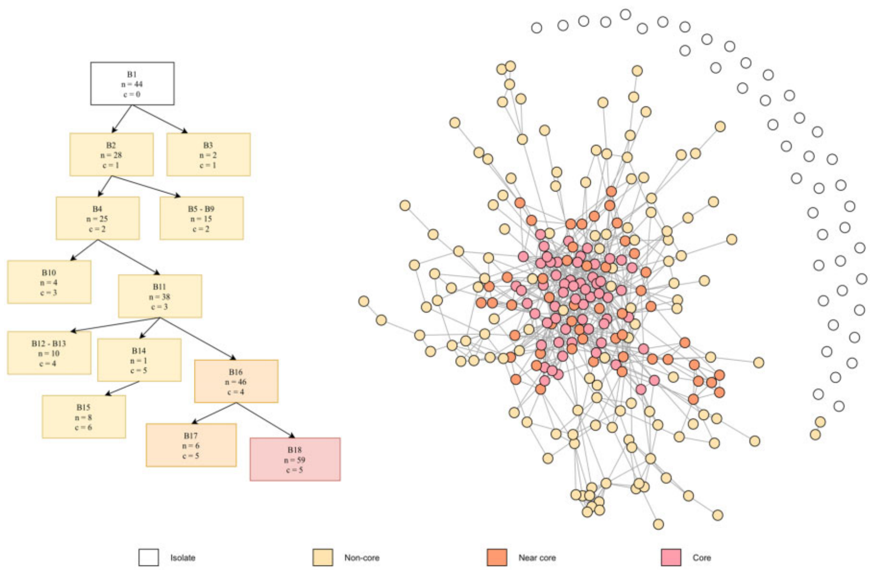

Figure 6 Cohesive blocs 2020 full CN. Firms are assigned to the most cohesive blocs of which they are members, thus membership counts do not include nested blocks. c = *k*-connectivity.

Table 5 Descriptive statistics cohesive blocks

Block	*N* firms	*K* connectivity	Avg degree	% black ownership	% black directorship	Avg PEP directors	Avg mark. cap
Core	59	5	9.75	26.52	46.87	2.54	ZAR23,858.56
Near core	52	5	6.33	29.49	44.89	1.96	ZAR22,674.82
Non-core	128	6	3.31	26.98	35.33	1.02	ZAR9,669.88
Isolate	44	0	0.00	19.22	29.18	0.25	ZAR4,407.29

cohesive blocs. The remainder are classified as Isolates. The graph in Figure 6 colors nodes according to this classification scheme, showing its nested and loosely concentric pattern.

Table 5 reports descriptive statistics of these groups. It shows, firstly, that size does appear to retain some importance for network position when considering the full (as opposed to Top 125) network. The average market capitalization of Core firms is around 2.5 times that of the Non-core. Race also appears to be a prominent factor in cohesiveness, although more by way of directorship than ownership. Average black ownership was more or less constant across all connected groups (but lower for Isolates). Core firms have noticeably more black directors on average—46.9% as opposed to 35.3 among Non-core. The more marked divergence however was in political connectedness. Core firms have an average of 2.54 PEP directors, almost two and a half times that of the Non-core. Isolates are defined by the near absence of PEP directors.

To get a firmer handle on the contribution of elite formation to cohesiveness I run two regressions: an OLS regression on degree centrality, and a probit regression on a binary variable set to 1 if the firm is a Core member. The main independent variables are the percentage of black directorship *(%black*) and the percentage of PEP directorship *(%pep*). Each model includes the following controls: the log of total assets (*logassets*), the size of the board (*board.size*), and dummies for whether the firm is a bank (*bank*), whether it is headquartered in Johannesburg (*joburg*) (the main commercial hub), whether the firm is a multinational (*multinat*) and whether it has any affiliation with the MEC (*mec*). I also include eight dummies for sector (not reported for presentability).

Table 6 displays the results from these regressions. Firm size is shown to have a strong effect on degree centrality, though plays less role in Core membership. Board size similarly has large and statistically significant association with centrality, but a much more muted connection with Core membership. Interestingly, an association with the MEC increases the likelihood of Core membership, indicating that historic firms continue to occupy influential positions despite the disembedding of internal MEC sub-networks. The number of black directors has a strong positive association with higher centrality, significant at the 1% level, but is substantively and statistically unimportant for Core membership. The best predictor of both higher centrality and Core membership appears to be the percentage of PEP directors a firm has. Coefficients on %*pep* are large and statistically significant at the 1% level in both cases. All else equal, one extra PEP board member is associated with an increase in firm's centrality of around 0.7. These results are strong evidence that the hiring of politically connected black directors did indeed play an important role in reinforcing corporate cohesion.

Table 6 Regression results

	Dependent variable:			
	Degree centrality		Core membership	
	OLS		Probit	
% black	3.138***		0.161	
	−0.867		−0.108	
% pep		7.255***		0.515***
		−1.336		−0.169
joburg	0.182	0.11	0.041	0.031
	−0.369	−0.356	−0.046	−0.045
logassets	0.607***	0.516***	0.029**	0.022
	−0.117	−0.116	−0.015	−0.015
bank	−0.665	−0.577	0.081	0.09
	−1.041	−1.012	−0.129	−0.128
board. size	0.363***	0.369***	0.023**	0.022**
	−0.085	−0.083	−0.011	−0.01
multinat	−0.356	−0.446	0.022	0.017
	−0.471	−0.457	−0.059	−0.058
mec	0.481	0.353	0.244***	0.234***
	−0.681	−0.663	−0.085	−0.084
Constant	−4.860***	−3.670***	−0.301*	−0.237
	−1.465	−1.398	−0.182	−0.176
Observations	282	282	282	282
R^2	0.426	0.458		
Adjusted R^2	0.394	0.428		
Log-likelihood			−109.181	−105.497
Akaike inf. crit.			250.362	242.995
Residual std. error (df = 267)	2.942	2.86		
F-statistic (df = 15; 267)	13.180***	14.994***		

Note: All specifications included eight sector controls, not reported.
*$P < 0.1$; **$P < 0.05$; ***$P < 0.01$.

8. Discussion

The results above strengthen the case for likening Apartheid economic institutions to other ‘hierarchical market economies’. The pre-democracy network reveals the importance of co-ordination by strict vertical control, exercised by dominant firms and controlling families within the six well-defined ‘axes’ of capital that formed the MEC. These axes joined to each other by overlapping interlocks and mutual participation on the boards of large banks—suggesting an extremely high degree of class-wide cohesion. The data here suggest that while liberalization set in train a deep process of economic restructuring, it did not immediately uproot the MEC from the CN. Instead, dense interlocks persisted around historic MEC firms for a long period, even after unbundling, while overall fragmentation was driven by the exit of older firms and the formation of new entrants into a more loosely connected periphery.

A somewhat similar pattern was found by Brookfield et al. (2012, p. 102) following liberalization in Chile. The buttressing of ties among older firms may in each case of reflected a drive to reinforce instruments of economic coordination with strategic partners, allowing the CN to act as an anchor of stability during the transition to an institutional framework premised on arms–length relationships. In South Africa, however, most ties were newly formed, suggesting that formal coordination is likely to have been only part of the story. Evidence of the MEC's persisting coherence as a social bloc and ongoing centrality in policy formation (Ashman *et al.*, 2011), supports the hypothesis here, that core stability was fundamentally political in nature. The proliferation of lateral ties between MEC firms allowed for structural cohesion within the complex to be maintained despite group unbundling and the disappearance of super-connecting individuals. This points to an institutionalization and depersonalization of internal relationships which will have facilitated the MEC's adaptation to the post-'Big Man', shareholder-driven era of governance.

The historic core did not show the same resilience in the subsequent decade, however, meaning a further loss of density that brought the South African CN broadly into the orbit of other liberal economies, albeit still firmly on its more cohesive edge. A few traces of the MEC remained at this stage, but none of the solid clusters which had previously dominated the network. Notwithstanding the relatively long reach of business groups into the democratic period, this suggests that the 'Mineral-Energy Complex' may no longer be the most useful analytical handle for grasping dominant arrangement of interests in the business system, despite its growing academic popularity (Ashman *et al.*, 2011, Sharife and Bond, 2011, Baker, 2015, Claar, 2018). More recent work on the MEC has tended to focus heavily on continuities in industrial structure, neglecting the close study of how productive systems articulate with corporate institutions, which was a hallmark of the research that originated the concept. However much the South African industry may be trapped in its historic mold, systems of ownership, control and finance have now evolved considerably, and with them the alignments of different sectoral interests.

As the erosion of the historic social bloc gradually fragmented the old core, a new one has taken shape. Numerically larger, more diffuse and sectorally diverse, its formation has been driven by the hiring of politically connected, well-networked black directors. This finding supports integrative interpretations of post-Apartheid elite formation, which argue that historic white and emergent black capitalists successfully superseded racial and cultural barriers to build cohesion around shared class interests. The network angle points to a greater diversification of power than commonly appreciated, with black directors becoming overwhelmingly dominant in the most central positions of the network, the ones associated with the unique political resources of an 'inner circle'. It also reflects an ongoing division of labor in the elite: whites remain over-represented in executive functions while political leadership has been ceded to black directors. These results, therefore, cast serious doubt over the increasingly popular view that 'white monopoly capitalists' have continued to hoard power on a racial basis while consenting to only a smokescreen of transformation (see Desai, 2018 for a review of these debates).

An intra-class perspective thus appears indispensable for understanding the evolution of the post-Apartheid CN. Politically driven interlocking, first centered around historically dominant interest groups and then around the integration of a new black elite, has had a pronounced effect on typology, allowing for the resilience of a cohesive core despite a broader trend of fragmentation. These trends in political networking have been shaped by democractization and the patterns of conflicts and coalition building that followed in its wake. They provide evidence in favor of Stark and Vedres' (2012) insight that the worlds of business and politics are organizationally entwined and that structures of affiliation in one field can influence those in the other. But where Stark and Vedres found that the sharp partisan divides emergent in post-Communist Hungary carried over to the corporate community, political dynamics in South Africa have produced a very different result. The ANC's singular dominance of the electoral arena and the state has allowed political interlocking to reinforce intra-business cohesion.

These conclusions have been reached by examining how political capital and historical coalitional alignments have correlated with network structure. They stand to be strengthened in various ways—most obviously by demonstrating the political *content* of interlocks: showing how they actually influence the social action and ideology of the elite. Here students of the South African network, like those of most other developing countries, are held back data limitations—specifically the lack of representative datasets on elite activities like lobbying and donating. Two divergent strategies for further research present themselves. First, an *agential* approach using qualitative methods to get a firmer grip on the microfoundations of interlocks and better theorize the mechanisms through which they shape political action. The interviews Useem (1984) conducted with Anglo elites many years ago might stand as a model for this work. Second, a *structural* approach exploiting cross-national variation to test the effect of networks on class-level, rather individual- or firm-level, outcomes. Cárdenas' (2020) cross-Latin American study showing that more cohesive networks soften elite attitudes towards redistribution shows a way forward for this research.

9. Conclusion

Comparative political economy today finds itself in a liminal phase between the decline of one 'supermodel' and the emergence of a new one. Schwartz and Tranøy (2019) define a 'supermodel' as kind of hegemonic paradigm in the field, which catalyzes academic and non-academic debate, usually by holding up the institutions of one or a small cluster of countries as ideal solutions to the 'most significant economic governance problem of the day'. They provide a stylized Kuhnian history of the discipline, in which reigning supermodels (e.g. *Fordism*, *Corporatism*, *The Developmental State*) are gradually overtaken by real-world events that reveal their theoretical blind spots—giving momentum to new models which reconcile the anomalies of the old one but invariably introduce new gaps and elisions. The most recent supermodel—*Varieties of Capitalism*—ascended with an approach that was supply-side oriented, firm-centric and rooted in transaction-cost theories which view institutions as efficiency-enhancing solutions to coordination problems. While these traits proved generative in relation to previous frameworks, they appeared less supple when confronted by a post-2008 world characterized by global imbalance, chronic demand shortfall and the failing legitimacy of mainstream institutions. One of the main correctives in efforts to found a new supermodel is a critique of the quasi-functionalist account of institutional evolution in VoC. The socio-political origins of institutions, and the political preconditions of their reproduction are core themes in most new ventures within the field (Amable *et al.*, 2019, Baccaro and Pontusson, 2022).

This paper calls for a similar analytical move—bringing politics back in—within one specific sub-field of comparative political economy, concerned with interlocks and CNs. VoC's 'supermodel' status within this sub-field has been clear until recently, with most research regarding CNs firstly—and often solely—as ‘coordinating’ rather than ‘powering’ institutions, to borrow Howell’s (2015, p. 400) terminology. Power and class formation, on the other hand, have been central to a parallel research agenda rooted in ‘intra-class’ theories of interlocks which has, however, remained distant from comparativist concerns. This paper reclaimed this tradition for comparative research and applied it to the understudied South African network.

It showed that liberalization had a profound effect on the network at a macro-level, leading to a far more diffuse pattern of interlocking as most theories would predict. But at a more meso-level, politics mattered. During the first decade of the transition, cohesion was preserved at the core of the network, owing to a high number of newly formed ties among firms that had constituted—and by some accounts continued to constitute—a dominant social bloc. Network centrality in this way appears to have correlated with political influence. Over the subsequent decade, the network core was reconfigured. Ties between historic conglomerates withered, but new ones proliferated among broader grouping of firms, particularly through the hiring of politically connected black directors. Racial elite formation, therefore, appears to have serviced the formation of a new inner circle—a political ‘leading edge’—which underpinned a new cohesive core.

These results might suggest a need for partly recasting the narrative around fragmenting national business communities. In the existing research on that topic, causation generally runs one way—from the liberalization of corporate and financial institutions to a loss of political cohesion, via a fragmenting CN. But if networks form partially out of *deliberate* efforts to undergird resources of collective action among groups of firms and elites, then causation will also run in the other direction. Factors that affect the incentives that corporate actors have to coordinate politically will also have an impact on network structure. The challenge for future research will be to identify factors that have had a correlated influence on the class interests of business across countries, and can consequently explain broad cross-sectional patterns. One compelling possibility is that there hasn’t been a diminution in the perceived necessity for cohesion as such—but rather a shift in its geographical alignments. Fragmentation at the national level may be partly an artifact of greater cohesion at the *international* level, as multi-jurisdictional firms redirect political ties to global partners (Heemskerk *et al.*, 2016), (even if it’s quite possible for such processes to complement rather substitute for national cohesion, as Murray (2017) shows).

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