



XI Congreso Internacional de la AEHE
4 y 5 de Septiembre 2014
Colegio Universitario de Estudios Financieros (CUNEF)
Madrid

Sesión: 7

Redes Empresariales: Una Perspectiva Cuantitativa

Business Networks: a Quantitative Perspective

Título de la comunicación:

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ARGENTINA AND ITALY COMPARED (1913-1990)**

Autor/es:

Andrea Lluch; Alberto Rinaldi; Erica Salvaj; Michelangelo Vasta

Filiación/es académica/s: CONICET, Buenos Aires/ Departamento di Economía Política, Università di Modena e Reggio Emilia and RECent/ Facultad de Economía y Negocios, Universidad del Desarrollo/ Departamento di Economía Política e Statistica, Università di Siena

Dirección electrónica de contacto:

alluch@conicet.gov.ar; alberto.rinaldi@unimore.it; esalvaj@udd.cl;
michelangelo.vasta@unisi.it

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“Business Networks: a Quantitative Perspective”

THE EVOLUTION OF CORPORATE NETWORKS IN LATIN ECONOMIES: ARGENTINA AND ITALY COMPARED (1913-1990)

Andrea Lluch (alluch@conicet.gov.ar)
CONICET, Buenos Aires

Alberto Rinaldi (alberto.rinaldi@unimore.it)
Dipartimento di Economia Politica, Università di Modena e Reggio Emilia and RECent

Erica Salvaj (esalvaj@udd.cl)
Facultad de Economía y Negocios, Universidad del Desarrollo

Michelangelo Vasta (michelangelo.vasta@unisi.it)
Dipartimento di Economia Politica e Statistica, Università di Siena

Abstract: This paper analyses the evolution of the corporate networks in two Latin economies – Argentina and Italy – from 1913 to 1990 by using the interlocking directorates’ technique. The paper focuses on six benchmark years: 1914 (1913 for Italy); 1923 (1927), 1936 (1937), 1954 (1952), 1970 (1972), and 1990 (1983). For each benchmark year, the largest 25 banks and 100 industrial companies have been selected for each country. For each benchmark year, after showing a descriptive statistics of the companies and the directors included in the sample, the paper develops a network connectivity analysis of the system in the two countries. This is integrated by historical and structural analysis. For the first time in corporate networks’ historical analyses, this paper includes syndics – special auditors for firms – as well as directors in the sample. This paper shows that, despite both Argentina and Italy belong to the same legal family, their corporate networks show a different structure and evolution over time. Also the actors that shaped the overall structure of the two corporate networks are different: in Argentina a major role was played foreign multinationals, while in Italy the crucial actors were banks and state-owned enterprises.

August 2014

Very preliminary and incomplete draft. Please do not cite without the authors’ authorization!

1. Introduction

In recent years an influential approach to the comparative analysis of corporate systems has been the “law and finance” theory (La Porta *et al.* 1997, 1998 and 1999). This approach suggests that legal protection of investors is the crucial determinant of capital market development, ownership concentration, organizational structures and economic growth, and argues that legal protection is ultimately a by-product of a country’s legal origin. According to this view, if a country has a high shareholding protection, as typical of the Common Law regulation, its economy will be characterized by a higher development of the stock market and an incidence of widely held companies *à la* Berle and Means (1932). In contrast, countries with a low shareholders protection, as typical of the Civil Law regulation, are generally characterized by higher ownership concentration, a greater role of the banks and the state in the financing of corporate growth, and to a larger resorting to non-market collaborative relationships for inter-firm coordination. The intuition is that investors are not willing to provide equity to finance a firm unless they are confident of receiving a fair return from their investment. If shareholder protection is low, minority shareholders require a high return from their investment to compensate them for the high risk of expropriation by the management/controlling shareholder. Hence, external finance is costly and fewer companies go public.

Recently this literature has been criticized, even on the basis of new empirical findings (Braendle 2006; Spamann 2006 and 2010; Siems 2008; Armour *et al.* 2009). Firstly, it has been shown that there is not a robust correlation between the legal origin of a country and its capacity to growth in the long run. Secondly, the patterns of evolution in different legal systems do not follow the linear direction suggested by the “law and finance” approach: in fact, changes in legal rules show much variety amongst countries of the same legal family as amongst countries of different legal origin. In order to meet this criticism, La Porta *et al.* (2008) have reformulated the legal origin claim by suggesting that legal origins do not refer only the legal institutions of a nation but in broader sense to “highly persistent systems of social control of economic life” which include culture and ideologies. On the one hand, now these authors do not point to the overall superiority of either of the two legal families: civil law is more suitable when economic “disorder” is severe and common law when the economic situation is “calm”. On the other hand, they admit that there are some factors – in particular globalization and increased international competition – that can promote “convergence” amongst different legal systems. Thus, according to this reformulation of the “law and finance” approach, a nation is not locked in a path dependency pattern but can move in various directions in the face of different situations. Nonetheless, common law stands for a strategy of social control of economic life that seeks to sustain markets whereas civil law seeks to replace them with state-desired resource allocation.

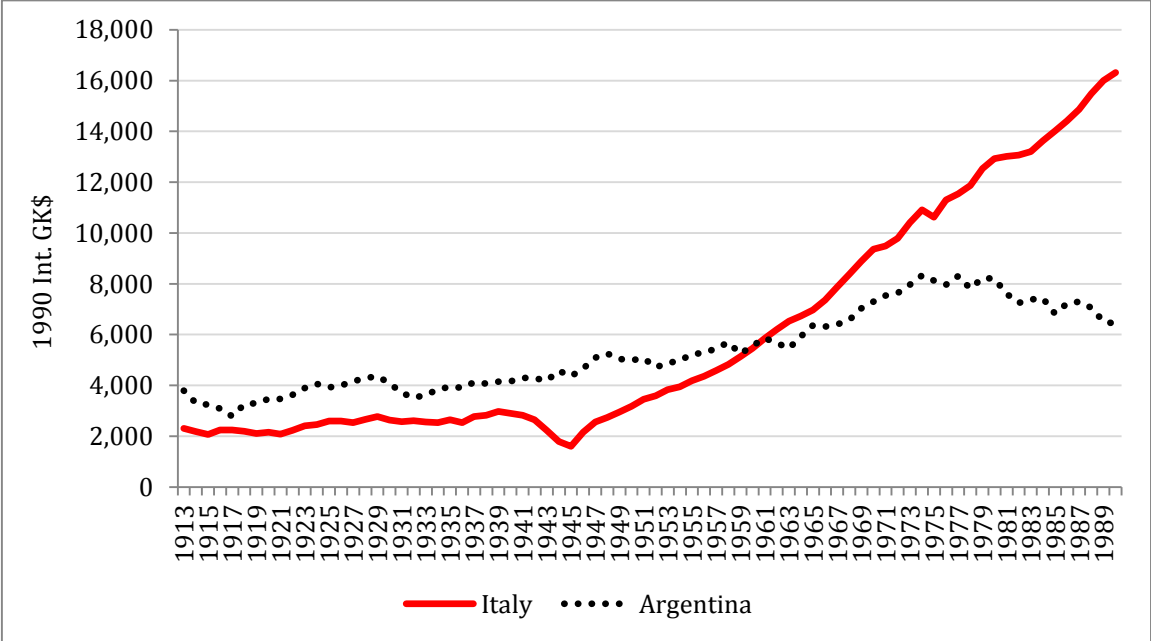
In the “law and finance” framework, both Argentina and Italy are French civil law countries, which protect investor least as compared not just to common law countries but also to German and Scandinavian civil law countries (La Porta *et al.* 1998). Accordingly, at the end of the 20th century, Argentina and Italy ranked amongst the worst performers in a sample of 49 countries as concerns legal safeguard for investors. Throughout the period covered by this paper, in both countries the one share-one vote principle was not met, proxy by mail was not allowed, shares could be blocked before the shareholders’ meeting, and there were no rules describing the extent of information disclosure that companies had to provide to shareholders.

Thus, the “law and finance” theory predicts that firms’ propensity to resort to non-market collaborative relationships for inter-firm coordination, such as the sharing of directors, is similar in countries with the same legal origin, whereas it differs considerably in countries with a different legal origin. In particular, civil law countries are expected to be intertwined by a dense web of corporate interlocks.

This paper addresses this issue by analyzing the structure of corporate interlocks in Argentina and Italy from 1913 to 1990. Such a comparison appears particularly fruitful as both nations belong to the same legal family. Starting from the late 19th century, Argentina became one of the main destination of Italian mass-emigration so that nowadays about one third of the Argentine population is made up of Italian-born people or their offspring. Argentina has a sizeable Italian business community and also the evolution of business law in the two countries was similar in many respects even if some differences exist. Corporate governance in both countries was based on a board of directors appointed by the shareholders’ meeting. In addition to the board of directors, in both countries the business law introduced the figure of the “syndics”, who were in turns appointed by the shareholders’ meeting and were responsible for monitoring the financial probity of the enterprises.

However, the performance of the two economies over the period considered has been very different. Figure 1 shows that in 1913 Argentina’s real GDP per capita was about twice as high as Italy’s. The average growth rate was very slow in both countries – with many ups and downs – until the late 1940s. In 1948 the Argentine GDP per capita was still double than the Italian one. Then, starting from the early 1950s, Italian growth became much faster, whereas Argentina did not leave its slow-growth path. In the second half of the 20th centuries, economic crises in Argentina became more frequent and in the 1980s the Argentine economy performed at its worst in the post-WW2 period. As a result, in 1990 Italy’s real GDP per capita was 2.5 times as high as Argentina’s.

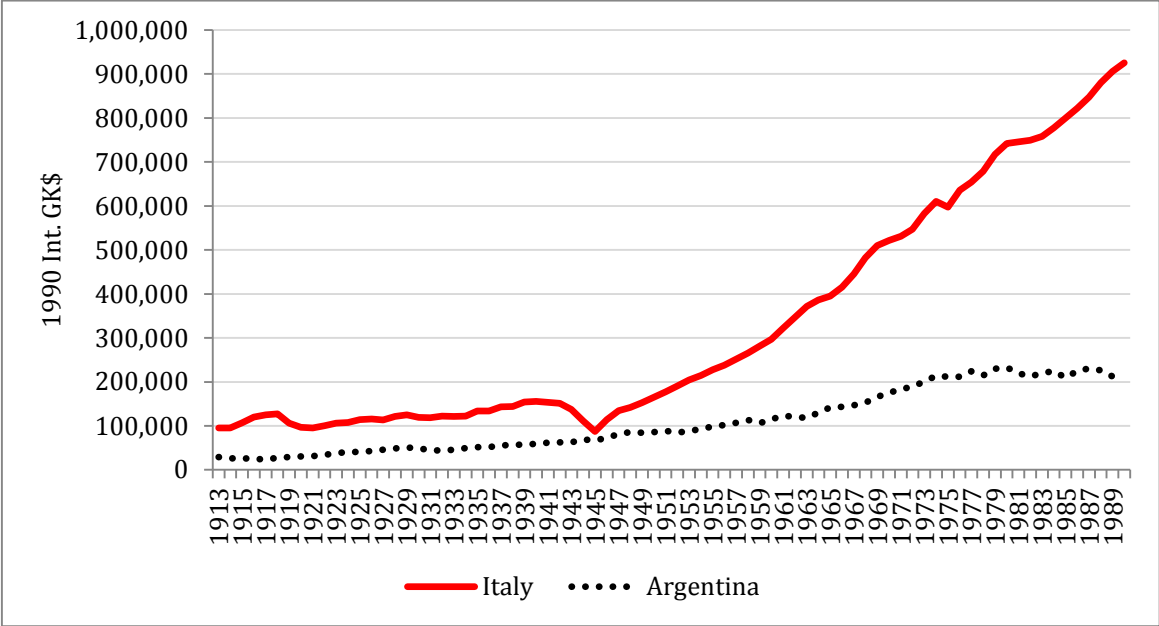
Fig. 1: GDP per capita in Argentina and Italy



Source: our own elaboration on Maddison (2009).

The fast-growth path triggered by Italy in the second half of the 20th century further enlarge the difference in the overall size of the two economies. Due to its larger population, Italy has always had a higher total GDP than Argentina. As clearly shown by Figure 2, the gap between the two countries remains pretty stable until the late 1940s, then it increases substantially.

Fig. 2: GDP in Argentina and Italy



Source: our own elaboration on Maddison (2009).

This paper is structured as follows. After this introduction, Section 2 analyses the business law in Italy and Argentina, with special regard to the role of *Sindicatura*. Section 3 presents a comparative analysis of the corporate network structure in Italy and Argentina. Section 4 investigates the role of ownership structures in determining the difference in the corporate network structures in the two countries. Section 5 focuses on the role and nature of syndics. Lastly, Section 6 concludes.

2. Legal framework in Italy and Argentina

As we have seen, Italy and Argentina are both French civil law countries. In Italy, the 1882 Commercial Code abolished the governmental authorization for the setting-up of joint stock company. This was replaced by more rigorous and precise conditions set by the law and by a control of legality entrusted to civil courts. Since 1882, Italy also introduced a board of syndics appointed by the shareholders’ meeting that replaced the monitoring by the royal commissioners appointed by the chambers of commerce. The board of syndics is responsible for monitoring the financial probity of the enterprises but has no management responsibility. The 1882 Commercial Code designed then a two-board system of corporate administration in which the assembly of the shareholders has the legal authority for appointing the two following boards and for deciding on the proposals of the first board (Teti 1999):

- 1) The board of directors (*Consiglio di amministrazione*), which is the executive body of the assembly of the shareholders. Administrative power belongs jointly to its

members but executive power is usually delegated to one or few of them who is called managing director (*amministratore delegato*);

- 2) The board of syndics (*Collegio sindacale*), which consists of three or five regular syndics (*sindaci effettivi*) and two alternate syndics (*sindaci supplenti*) who cannot be dismissed during their period of office. Their duty is to exercise control and supervision over the management of the company, to monitor the decision taken by the first board and to take administrative decisions if the first board fails in its duties. This second board is legally responsible, jointly with the first board, for the decisions taken by the first board itself.

In the period 1900-1972, Argentina's corporate governance system was based on the Commercial Code (1899). Similarly to Italy, board members were appointed at shareholders' meetings and entrusted with the immediate management of corporate businesses. Argentine law did not require a specific number of board members nor introduce the figure of managing director. During this period, the only requirement to be a director was to be a shareholder of the company but, in practice, only one share was necessary. In addition, the directors of corporations were not liable for the company's obligations but they were personally and jointly responsible to the companies and to third parties for fraud, neglect or violations of the laws or the articles and regulations of the company.

Inspired by Italy's code, Argentine lawmakers incorporated into the 1899 Code the demand for an internal comptroller and oversight body for corporations (Halperin 1965). This body was to be managed by one (or more) syndics appointed by corporations' Shareholders' Meeting and serving as company inspectors, with broad, varied duties: the syndic is entitled to take part in board meetings (but not to vote), may call extraordinary meetings when the board failed to do so, must inspect the company's administration and may examine the books and documents, must ensure that the articles were being observed and, in general, satisfy himself that the board is complying with the company's rules and regulations. However, despite their common civil law roots, legislation in the two countries differed in one important respect: in Italy, corporations' syndicate was a collegiate body, while Argentina's law established that a corporation should have "at least" one syndic.

From the onset, the introduction and the use of syndicate to effectively oversee controlling-majority stockholders raised some questions and fueled debates in both countries. Indeed, in Italy and, from its inception, the 1882 Commercial Code established that, in the presence of a well-grounded suspicion that the board of directors and the board of syndics failed to exert their duties, a qualified minority of shareholders might denounce this fact to the commercial court. The latter might in turn order inspections of the company's accounting books and, appoint one or more commissioners on this purpose. However, these commissioners did not exert an effective protection of minority shareholder. In fact, if the commissioners found confirmation of the irregularities in the management of the enterprise, the court might only convene another shareholders' meeting that was controlled by the same majority that had appointed the directors and syndics whose irregularities had been denounced (Teti 1999).

Italy moved first in reforming the syndicate and even then, those shortcomings were only partially overcome by the 1942 Civil Code. This new law established that some members of the board of syndics must belong to the special list of chartered accountants (*Revisori Ufficiali dei Conti*) edited by the Ministry of Justice or to the professional rolls determined by the law. Moreover, the law-court was entrusted with more powers in the event of irregularities in the management of the enterprise: now it could revoke the directors and

syndics and appoint an official receiver in their place. The receiver might in turn propose a liability action against the directors and syndics (De Luca and Verrilli 1992).

In Argentina, leading legal experts (Rivarola 1957; Halperin 1965) argued bitterly over the role of syndics, noting that their application had proven less effective than in Italy, where, as mentioned, syndics acted more as official account reviewers (auditors) since 1942. Syndics' failure in Argentina was attributed to a number of reasons: 1) their selection: syndics are chosen by the same majority that appoints the board they are expected to control; 2) their number, as one-person syndicate fail to represent groups outside the majority, rendering effective control impossible in large companies; 3) personal qualities are not required; 4) their short tenure; 5) the ability to revoke their appointment by a simple majority of shareholders present at the meeting. Argentine laws (1951:58) also viewed this institution as failing to serve its purpose: "The system is said not to produce good results in Argentina because of certain loopholes in the law, such as no mention of position disqualifications, etc. As a result, governmental supervision has become more important."

Despite these opinions and a general consensus on the need to change Argentina's corporation laws, it was only in 1972 that a corporation legal framework was passed (Act 19,550). This law was largely amended in 1983 by Act Nbr. 22,903. Since then, it is not mandatory to be a shareholder of the company to be eligible as director. This law established that corporations might divide competencies between their board and an executive committee (consisting of some directors). Therefore, companies can opt for a two-tier board structure. However, companies generally have a unitary board structure. Act 19,550 also made provisions for supervisory boards, but it continues to be optional and few companies applied this system.

As regards the role of syndics in Argentina, Act Nr. 19,550 (1972 – like Italy's 1942 code – established a specific professional qualification for syndics (they must be either accountants or lawyers), pointing out, for the first time, a set of incompatible traits to guarantee their impartiality. Nonetheless, the system continued to be widely criticized, as "when founding a corporation, shareholders usually appoint the corporation's accountant or attorney, as they believe they are complying with a formality required by law." Syndics' uselessness led to a more candid approach in Act Nbr. 22,903 (1983) that allowed, in some specific cases, corporation to do away with syndics. This has been the notion followed since then by most corporations in Argentina.

Therefore, while both nations – Italy and Argentina – follow the same legal tradition and did introduce syndics into their requirements, their state regulations designed to oversee corporations differ, in line with Armour *et al.* (2009) critique to the "law and finance" approach. The remainder of this paper analyses whether these features help to explain the structures of these countries' corporate networks.

3. The structure of the networks

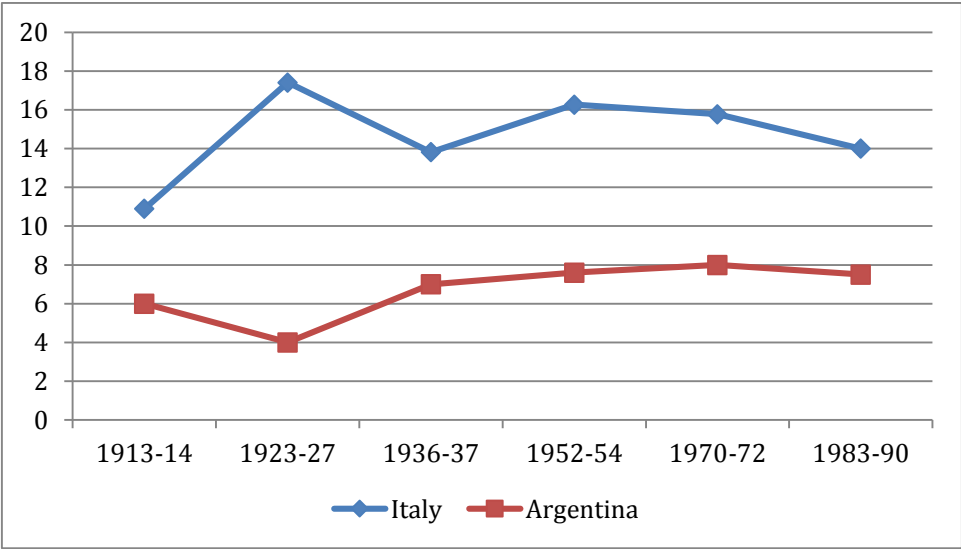
Our sample contains many more Italian directors and syndics than Argentine ones (see the General Tables in the Appendixes 2 and 3). This means that Italian firms have larger boards than Argentine ones. The average size of an Italian board of directors is never lower than 10, with a peak of 14 members in 1927. Conversely, the average size of the Argentine board fluctuates between a minimum of 4 in 1923 and a maximum of 7 directors in 1970.

The difference in the average number of syndics is even sharper. As we have seen, Italy's legislation establishes that joint stock companies must have a board of three to five regular

syndics. Thus, apart from 1913 when only one company (that had five syndics) reported information about syndics, in all the remaining benchmark years the average size of the board of syndics is about four, with a minimum of 3.5 in 1936 and a maximum of 4.5 in 1952. By contrast, Argentina’s law allows companies to appoint just one syndic and this is what most firms did. Thus, the average number of syndics per company in Argentina is little more than one in all benchmark years from 1914 to 1970 (just one in 1923 when only 11 companies out of 125 reported information about syndics). In 1990 the average number of syndics per firm rises to 2.3; however it is still about a half of the average number of syndics of Italian firms in 1983.

As a result, the average size of the board, including both directors and syndics, is much higher in Italy than Argentina throughout the period investigated (see Figure 3).

Fig. 3: Average size of the board (directors and syndics)



In the whole period under investigation, the Italian directors’ network consists of a large main component that includes no fewer than 90% of the firms of the sample. However, in 1983 that proportion decreased to 76%. By contrast, the main component in the Argentine network is much smaller in all benchmark years: it reaches a 60% peak in 1954 but then it declines and plummets to 16% of total firms in 1990.

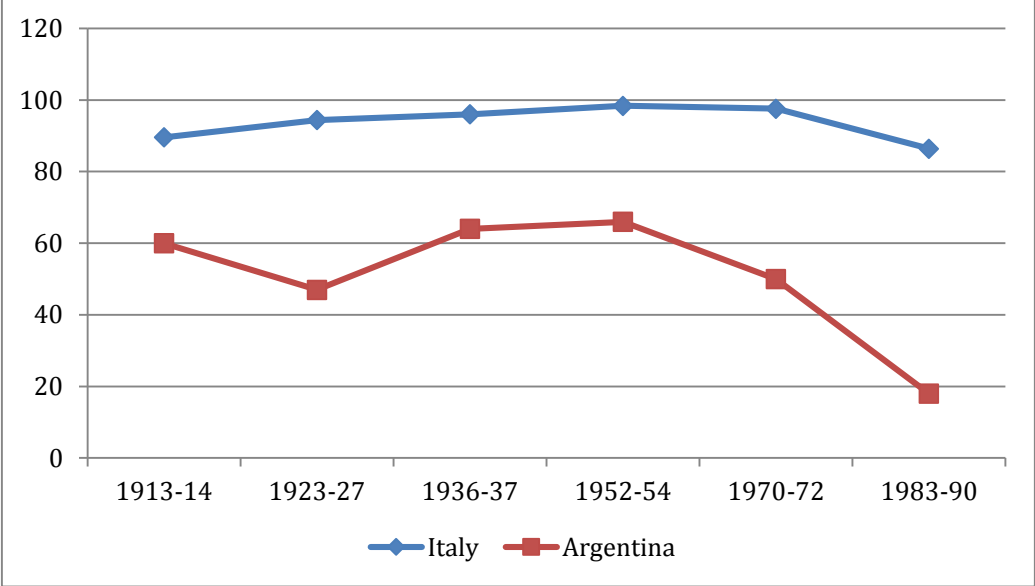
The main component of the syndics’ network is smaller in both countries. In Italy, it is nonetheless sizeable: it includes about 50% of the firms in 1927 and 1936, reaches a 78% peak in 1952 and then declines, but in 1983 it still includes 55% of firms. By contrast, in all benchmark years the main component of the Argentine syndics’ network shows very low values, which never exceed 10% of total firms. Thus, contrary to their Italian counterparts, Argentine syndics do not seem to form a real network, but only a few clusters that are surrounded by a great number of isolated firms.

This may be attributed to the specific role of syndics in the oversight of Argentine corporations. For the most part, the companies surveyed featured concentrated ownership structures, and their owners appointed someone they trusted to serve as syndic (as a result,

this individual did not serve the legal purpose of protecting minority shareholders). Also, as noted earlier, the lack of professional requirements for syndics might explain why a parallel professional network was not built alongside the corporate network. As a result, syndics' networks in Argentina turned out to be fragmented, with a lesser organizing capability as compared to networks built by their Italian counterparts.

The main component in the total network (including both directors and syndics) closely mirrors that of the directors' network (see Figure 4). In Italy, only in the two final benchmark years syndics add a not negligible number of companies to the main component, enlarging it from 89% to 98% of firms in 1972 and from 76% to 86% of firms in 1983. In Argentina the only significant addition to the main component occurs in 1972, when syndics enlarge the main component from 32.5% to 50% of firms.

Figure 4: Percentage of firms in the main component (directors' and syndics' network)



The percentage of isolated and marginal firms is also always much higher in Argentina than in Italy in all the networks considered. In the directors' network, the percentage of isolated and marginal firms in Argentina fluctuated around 50% from 1914 to 1954. In subsequent years, the corporate networks became less agglomerated and centralized. The higher openness of the economy in the late 1950s and 1960s led to the arrival of more foreign investments and the disruption of existing IDs. In fact, by 1970, board interlocks were reshaped largely as a result of the massive arrival of multinationals, as no relevant changes were introduced into Argentina's legal system (until 1972). The changing structure of IDs reflects these dramatic developments in the economy as a whole. The percentage of firms in the main component fell with isolated and marginal firms increasing. Since then, the percentage of isolated firms jumped to more than 80% in 1970 and remained pretty stable on that value also in 1990.

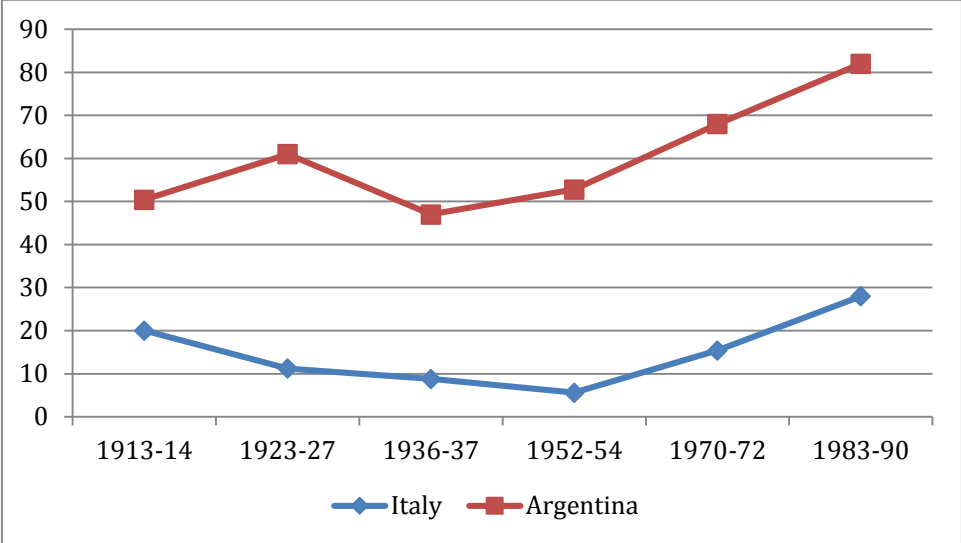
Instead in the Italian directors' network isolated and marginal firms steadily decreased from 20% in 1913 to 11% in 1952; then they rose to 25% in 1972 and to 46% in 1983. This was probably the consequence of the nationalisation of the electricity industry in 1962 which

severed the web of interlocks of the former electrical companies and of the beginning of the transition from the technological regime of the second to that of the third industrial revolution, which pushed companies to pursue higher flexibility and resort to a lesser extent to the sharing of board members.

In the syndics' network, the percentage of isolated and marginal firms in Argentina was always very high with values higher than 80% in all benchmark years. In three benchmark years (1914, 1923 and 1990) the totality of firms in the syndics' network were isolated or marginal. In the Italian syndics' network isolated and marginal firms drop from 67% in 1927 to 38% in 1952, but then in the subsequent benchmark years they rise and in 1983 account for 70% of total firms.

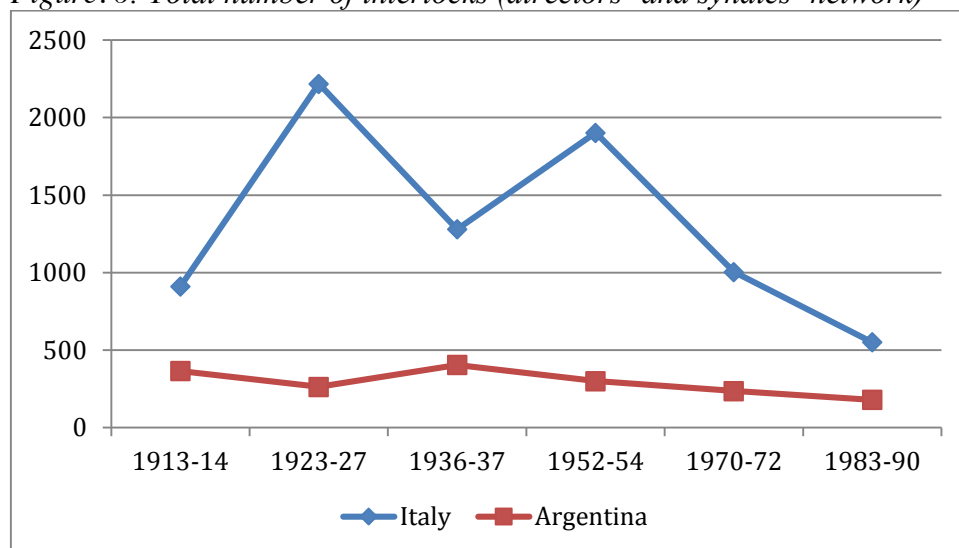
The overall picture is that in both countries isolated and marginal firms in the total network follow the dynamics of the directors' network with values that in Italy are significantly lower in all benchmark years (see Figure 5).

Figure 5: Percentage of isolated and marginal firms (directors' and syndics' network)



The number of interlocks (or lines) between companies is also always much higher in Italy in all networks (see Figure 6 for the total networks). In Italy, the total number of interlocks in both the directors' network and the total network reaches a peak in 1927, when the influence of the German-style universal banks on the nation's corporate system was highest. Then it decreases in 1936, rises again in 1952 before falling considerably in 1972 and 1983, plummeting to its minimum levels. The number of interlocks in the syndics' network has its peak in 1952; it drops considerably in 1972 but decreases only slightly in 1983. The total number of interlocks in Argentine network seems to vary less over time. Also in this case the lowest values are reached in the most recent benchmark years.

Figure 6: Total number of interlocks (directors' and syndics' network)



The average degree is the best index to assess the connectedness of a network, as – contrary to the density index – it does not depend on the size of the sample. Also in this case Italy has values that are always higher than Argentina.

As it could be expected, the dynamics of the average degree is similar to that of the total number of interlocks. In Italy, the average degree in both the directors' network (Figure 7) and the total network (Figure 8) reaches a peak in 1927, when the German-type universal banks had a pre-eminent position in the system. Then it decreases substantially in 1936, as a consequence of the collapse of the major universal banks. It rises again in 1952, despite the increase in investors' protection consequent to the enactment of the 1942 Civil Code might have us expect a larger resorting to market-based coordination forms among firms as advocated by the “law and finance” theory. Italy's average degree falls dramatically in 1972, again in the absence of any increase in investors' protection. Finally, it further declines in 1983, when it plummets to its minimum levels. This latest move is congruent with the increase of investor protection consequent on the creation in 1976 of Consob (Italy's Stock Exchange Commission), which enhanced corporate disclosure. However, it seems principally the continuation of a process – a decline of the Italian corporate network – which was already under way since the 1960s and whose main determinants are to be found in a change in the ownership structure of Italian capitalism triggered by the nationalisation of the electricity industry in 1962, and in the beginning of the transition from the technological regime of the second to that of the third industrial revolution. The latter shortened product life cycles, made markets more volatile and pushed firms to pursue higher flexibility through a variety of means, including the severing of dense inter-corporate webs generated by IDs.

By contrast, the collapse of the universal banks did not undermine Italy's syndics network, whose average degree increases between 1927 and 1936 before reaching its peak in 1952. It drops considerably in 1972 but the decrease in 1983 is very slight and much smaller than that of the directors' network (Figure 8).

Conversely, the average degree in the Argentine network varies less over time, since many directors were syndics as well. Also in this case, the lowest values are reached in the most recent benchmark year, 1990. Similarly, as well as in Italy, the fall in the average degree between 1937 and 1954 does not seem the consequence of higher investors' protection, but

rather of utilities' nationalization during the Peronist administration that displaced railway and electricity companies from the centre of the network. The 1972 Corporation Act also did not ensure greater protection for minority shareholders. Thus, the further substantial decline of the Argentine corporate network we observe between 1970 and 1990 seems to be associated again with a change in ownership structure, due this time to increased penetration of MNE disconnected from Argentine companies.

Dynamics quite similar to that of the average degree are shown in both countries by all the other centrality and cohesiveness indicators: density, diameter, average distance, degree centrality, and closeness centrality.

Figure 7: Average degree (directors' network)

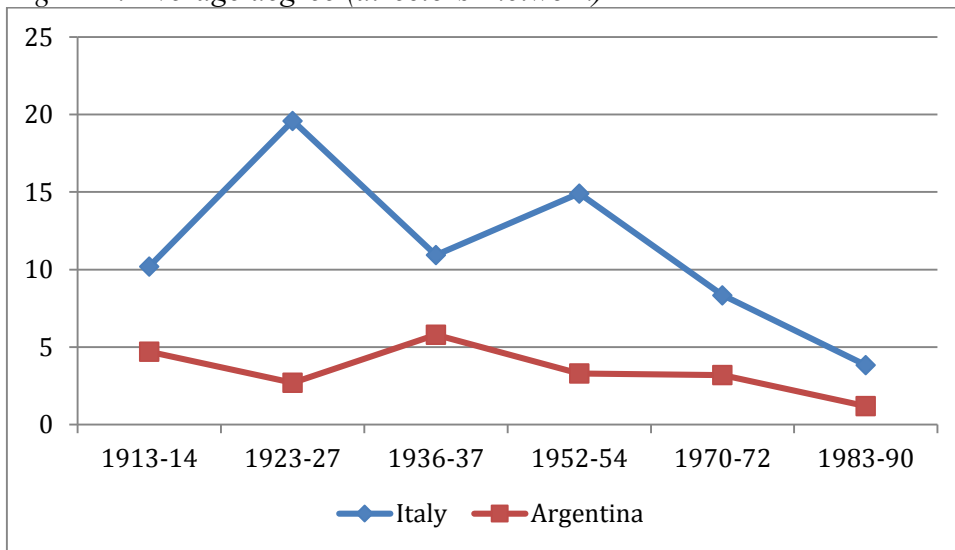


Figure 8: Average degree (syndics' network)

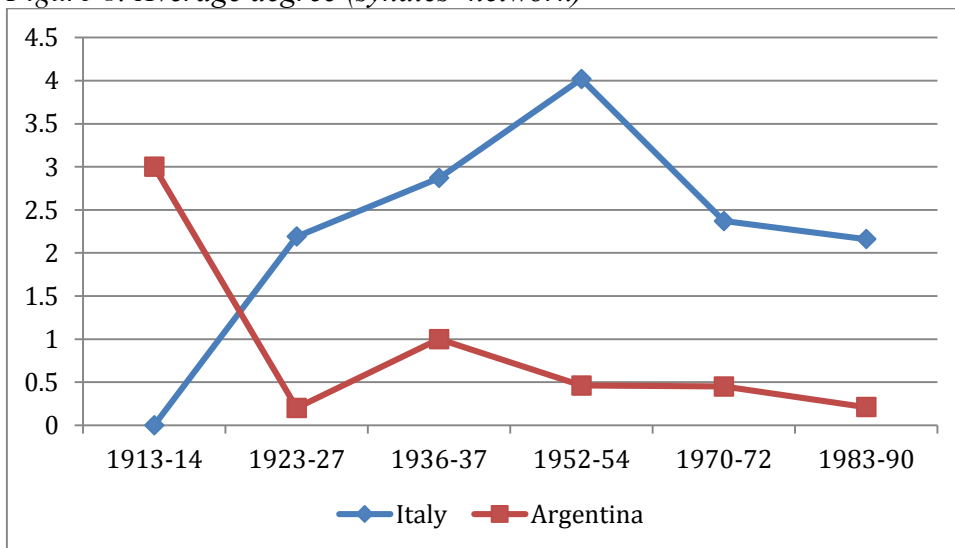
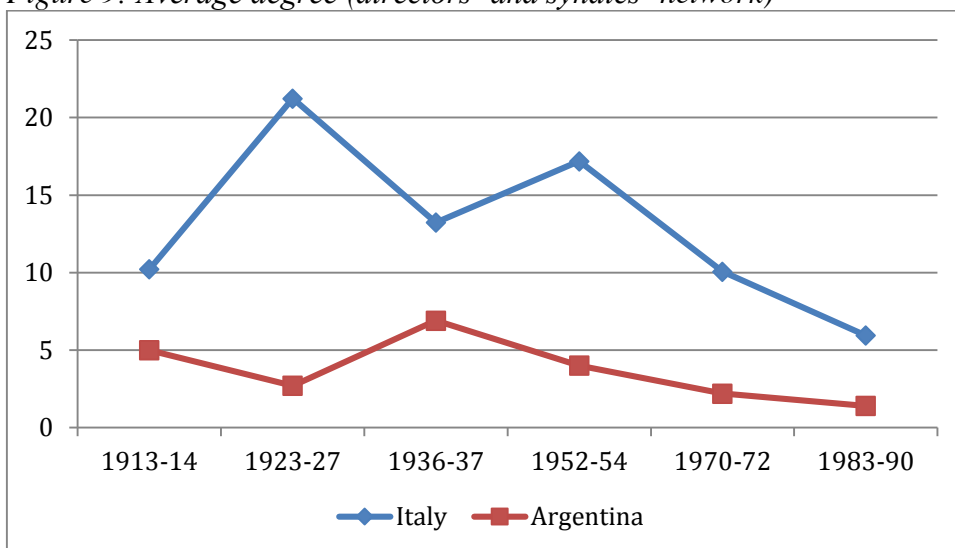


Figure 9: Average degree (directors' and syndics' network)



Our overall evidence is that in Italy we are in the presence of two networks, clearly distinct each from the other: the directors' network and the syndics' network. The two networks present very different structures. The syndics' network was formed later and was much looser than the directors' network, with a higher number of isolated and marginal firms, a smaller main component and lower connectedness indexes.

The strong disconnection between the two networks is clearly shown by the fact that very few ties linked the boards of directors and the boards of syndics (Table 1). In fact, inter-board IDs never exceeded 10% of the total. They were nearly non existing in 1913, then rose to 4% of total IDs in 1927 and to 6% in 1936. After remaining stable on this proportion until 1972, they surged to little more than 9% in 1983, principally as a consequence of the dramatic drop in the directors' IDs.

The Italian directors' network is denser but its connectedness is more variable, with sharp ups and downs over time. Its structure seems more affected by the two major institutional break-ups: the collapse of the German-style universal banks in the early 1930s which was followed by the formation of a big SOE system, and the nationalization of the electricity industry in 1962 which destroyed the dense web of ties of the former electrical firms. That is, for most of the 20th century Italian firms relied principally on directors' ties rather than on syndics' ties when they decided to get connected. However, the Italian directors' network sharply declines in two final benchmark.

The syndics' network is looser but seems more resilient over time. As a result, the structures of the two networks seem to converge in the final benchmark year. Starting from the 1970s, the syndics' network declines less than the directors' network.

Why is the syndics' network more resilient? Perhaps because its looseness better accommodates the search for flexibility (and more flexible organizational settings) which characterized the transition from Fordism to post-Fordism that accompanies the advent of the technological regime of the third industrial revolution.

By contrast, Argentina has one network, which includes directors and some clusters of syndics and this is always less dense than the Italian one. Syndics are more embedded in the directors' network and so they do not form a proper syndics' network (see Table 2).

Differences in law between the two countries affect the network's structure. Italian firms cannot appoint just one syndics; they have to appoint a board of syndics with no fewer than three regular syndics and these legal provisions fostered the formation of a syndics' network. However, as we argue in the next section, differences in the ownership structures seem a major cause of the difference in the structure of the two nations' corporate networks.

Table 1: Italy: Total number of lines by type of interlock

Year	Directors' IDs		Syndics' IDs		Interboard IDs		Total IDs	
	IDs	%	IDs	%	IDs	%	IDs	%
1913	906	99.6	0	0	4	0.4	910	100
1927	2,000	90.2	132	5.9	86	3.9	2,218	100
1936	1,010	78.9	192	15.0	78	6.1	1,280	100
1952	1,511	79.4	281	14.8	110	5.8	1,902	100
1972	783	78.0	159	15.8	62	6.2	1,004	100
1983	355	64.4	146	26.5	50	9.1	551	100

Table 2: Argentina: Total number of lines by type of interlock

Year	Directors' IDs		Syndics' IDs		Interboard IDs		Total IDs	
	IDs	%	IDs	%	IDs	%	IDs	%
1914	349	95.6	6	1.6	10	2.7	365	100
1923	261	99.2	2	0.8	0	0	263	100
1937	364	86.7	47	10.9	19	4.4	430	100
1954	267	89.0	24	8.0	9	3.0	300	100
1970	192	81.4	23	9.7	21	8.9	236	100
1990	173	96.1	4	2.2	3	1.7	180	100

4. Interpretations of the different structures of corporate networks in Italy and Argentina

We have shown that Italy has a denser network than Argentina. We argue that ownership structure, rather than minority shareholders' protection, might explain the difference.

First of all, Argentina has more MNE in both the total sample and among the most central companies. By contrast, in Italy corporate ownership is fundamentally Italian, and the principal actors are local capitalists, banks and the state. Banks are more central in Italy, at least until the 1930s. In 1913 the larger German-style universal banks – that had been created in the 1890s – were at the centre of the network. Gerschenkron (1962) singled out these banks as the major underlying cause of Italy's first big industrial spurt in the fifteen years prior to WW1. In his view, they provided financial support and managerial advice to the major companies, especially in the leading sectors of the second industrial revolution such as steel, heavy engineering, electricity, and motor vehicles.

In 1927 the Italian corporate network reached its highest connectedness. The post-WW1 crisis had made it impossible for many companies to repay their debts to banks. So the banks unwillingly transformed their "frozen" loans into share capital and became the real owners of many industrial companies. In the 1920s, instead of selling their shares, the banks increased their stakes in order to sustain the Stock Exchange quotations (Confalonieri 1992,

1997). Thus, the larger universal banks further strengthened their links with industry by superimposing IDs on share control relationships. As a result, they also strengthened their position at the centre of the corporate network.

When the Great Depression struck, the entire system collapsed and both the banks and their industrial clients were bailed out by the state. In 1933, the big state-owned holding Iri took over the universal banks and their industrial securities and as a result it became the majority owner of a multitude of companies in a vast array of industries, especially capital intensive ones (Amatori and Colli 1999). In 1936, Iri controlled 12.5% of the total capital of Italian joint stock companies.¹ In the same year, a new banking law imposed a clear-cut separation between banks and industry. Banks were allowed to practice only short-term credit, while their share participation in non-financial companies was strictly limited. At the same time, industrial credit was entrusted to new specialised institutes, most of them state-owned (La Francesca 2004).

The juridical instrument used by the Italian state to intervene in the corporate ownership in 1933 – the “state shareholding formula” – powerfully prompted the creation of IDs. Such a formula places a state-owned holding company at the top of the system: it is subject to public law and owns an amount of shares, not necessarily the majority, of several operative companies; the latter are joint-stock companies subject to private law. This can be done either directly or via sectoral sub-holdings (i.e., for steel, telecommunications, shipyards, mechanical engineering, and so on) that coordinate the activities in specific economic sectors. Such sub-holdings are in turn subject to private law and can have private minority shareholders (Rapporto Saraceno 1956). The fact that usually the state does not own the totality of the shares of the sectoral sub-holdings and of the operative companies implies that many SOEs have private minority shareholders who also sat in SOE boards. As many of these individuals also held board positions in private firms, their co-opting in the boards of directors of SOEs boosted the creation of IDs between the state-owned and the privately-owned sectors of the economy and, more generally, in the Italian corporate system as a whole. The boundaries of Italian SOEs further expanded after the WW2: Iri remained the main pillar of the system but a second pillar, the state energy super-holding, *Ente Nazionale Idrocarburi* (Eni), was founded in 1953 (Pozzi 2009).

These two big state-owned groups contributed considerably to Italy’s catching up to the technological paradigm of the mass production during the “Golden Age”. Iri gave a considerable contribution in the creation of infrastructures and heavily invested in capital-intensive industries, especially steel. Eni was addressed to meet the country’s needs in the fields of energy.

As we have seen, since the 1960s the Italian corporate networks started to decline and in 1983 its structure had become more similar to the Argentine one. One of the major causes of the disentangling was the SOEs’ changing role and their disconnection from private companies.²

Someway paradoxically, this occurred when, at the beginning of the 1980s, the extension of the SOE sector was the largest in Italian history (Toninelli and Vasta 2010). What had happened? In the face of the economic crisis of the 1970s, SOEs were given the mission of

¹ For a detailed reconstruction of the boundaries and the weight of SOEs in Italy in the 20th century, see Toninelli and Vasta (2010).

² For an analysis of this process with regard to a large sample of more than 5,500 firms, see Rinaldi and Vasta (2012).

rescuing the larger private groups. SOEs bought private shareholders' minority stakes in those SOEs that were no longer paying dividends. Massive losses forced several SOEs to reduce their capital. In many cases, the subsequent capital increase was underwritten only by the state, so that recapitalization brought with it a substantial change in ownership structure of the SOEs involved, leading to the almost total disappearance of private shareholders. This reduced the scope for generating IDs based on share relationships between SOEs and private companies (Bianchi 2002). These bailouts further worsened the SOEs' financial situation, making them more exposed to political pressure. As a consequence, in the 1970s a new generation of managers that were more closely tied to the governing political parties were appointed at the top of the SOE system. These new managers pushed the SOEs to grow larger without consideration of profit and loss. At the same time, partnerships and joint strategies with private companies were treated with suspicion because they could destabilize the balance of power between and within the political parties. Hence, party-controlled SOEs became less interested in recruiting private businessmen for their boards of directors. In addition, the affiliation of the new generation of SOE managers with political parties made private companies reluctant to appoint them to their own boards, lest they could become instruments for the parties to expand their influence on private business (Barca and Trento 1997; Amatori 2000).

Moreover, the crisis of Fordism and the emergence of the new technological paradigm of the third industrial revolution based on ICT pushed Italian big business to pursue higher organizational flexibility since the mid-1970s. This involved loosening the constraint consequent on their dense ties with SOEs, among which joint directors stood out. By contrast, the looseness of syndics' interlocks better accommodated such a search for flexibility and this probably explains the resilience of the syndics' network between 1972 and 1983.

During the 1990s, massive privatizations reduced the weight of SOEs opening a new era of state entrepreneurship in Italy. Iri was dismantled and closed down, but the state retained control of national champions – among which Eni – in some strategic sectors as energy, telecommunications and defence. The stock of these companies was also partially sold off to raise funds from private investors. At the end of the century, the diffusion of SOEs within the Italian corporate economy was considerably reduced, but at the same time the remaining SOEs became competitive in the international arena (Felice 2010).

Also Argentina had an interventionist state, but quality and effect of state intervention on the structure of the corporate network was very different from Italy. In the 19th century Argentina was an open economy, which remained fully integrated with international markets, both as a producer of “staple” goods and as a major destination for foreign investment. From the late 19th century, the political stabilization of the country led to a liberal order controlled by an oligarchic elite who promoted the modernization of Argentine society and the integration into the global market. Economic liberalism, however, was tempered with pragmatism (Lewis 1987) and Argentina, as other Latin American countries, had the highest tariffs in the world prior to WW1. In the late 19th century, the state started to play a key role as a regulatory agent. At the same time, Argentina's state also initiated business operations with the creation of a number of provincial and national financial institutions (for example, the Buenos Aires Province Bank and the National Mortgage Bank) and utilities, like the postal service, railroads, and sanitation works (Rougier 2008).

Argentina was deeply affected by both the Depression and WW2. In the increasingly complex global setting, the Argentine economy became more closed than in preceding

decades. The collapse of the primary goods export-led growth process led to the emergence of a new development strategy combining industrialization and increased state intervention. The 1930s saw a more active role of the state in the economy, using tools ranging from exchange controls, tariff raises, to direct intervention in the major export product markets. This trend was reinforced by the economic policy of the military government in 1943-1945, and later of the Peronist administration (1946-1955). First, from 1943, several electric utility companies were expropriated by provincial administrations and transferred to the state-owned electricity company. The nationalization of public utility companies was later included in the 1946 Peronist Economic Plan and incorporated into the Constitution of 1949, but not all foreign public utilities were nationalized.

Second, several SOEs were created – like the State Merchant Fleet in 1941, and the General Military Manufacturing Department (DGFM, for its Spanish acronym). Next, the state also engaged in industrial operations in order to build a number of industries viewed as strategic (iron and steel, for instance). Thus, in 1947, the government founded SOMISA, a public-private company within DGFM's purview. It also created a National State Industries' Department (DINIE). As a result, some sectors became state monopolies run by public enterprises, while, in other cases, the state acquired shares of private companies through some state-controlled investment funds. As a result, some sectors became state monopolies run by public enterprises, whereas in other cases the state acquired shares of private companies through some state-controlled investment funds.

The period 1955–1970 featured a new phase in the development strategy in Argentina. As result, the state increased its involvement as regulator, business owner, and distributor, although this latter role changed over time, depending on the political inclination of the many governments that followed after 1955 (Belini and Rougier 2008). Argentine capitalism was characterized by then as a closed economy, regulated with protection mechanisms and industrial subsidies that coexisted with basic economic imbalances, in particular balance-of-payment issues and increasing inflation rates. In this context, the Argentine government promoted the inflow of foreign investment (FDI) as part of the development strategy, and MNEs became a central actor in Argentina's industrial development.³ By 1970, new foreign players and the growth of MNEs that had already been established in Argentina changed radically once again the ownership structure of larger corporations. As said, the participation of the state in the economy did not decline. In fact, the state-owned banks became the main source of industrial credit for the largest (both local and foreign) firms in the economy.⁴ In turn, new enterprises were created to focus on projects viewed by military authorities as strategic for industrialization, such as Hidronor, Hipasam, Petroquímica General Mosconi, and Petroquímica Bahía Blanca (Rougier, 2008).

Combined, and according to studies conducted by the General Receivership of Public Enterprises (SIGEP) in the early 1980s, the contribution of SOEs to Argentina's GDP might have fluctuated from a 5.2% trough in 1958 to a 6.9% peak in 1980. Their GDP share climbed slightly, from 5.5% in the 1950s to 6% in the 1960s and 6.3% in the 1970s, but SOEs were consistently besieged by massive losses.

³ This process climaxed during the Frondizi administration (1958–1962). Act 14,780, related to FDI, passed in 1958, with extremely favorable terms for MNEs.

⁴ Leading instruments included long-term facilities granted by *Banco Nacional de Desarrollo* (BANADE) and international financial institutions' loans (e.g. *Banco Interamericano de Desarrollo*) guaranteed by the State through BANADE (Barbero and Rocchi 2003).

In 1976, a new dictatorship tried to implement a market-oriented program with financial and trade liberalization. The intention was to reduce the role of the state, and to open the economy to external competition, but its implementation was flawed and the reforms failed. The situation changed radically in the 1990s. Carlos Menem's new government launched a number of pro-market reforms geared towards stabilizing macroeconomic conditions, deregulating Argentina's financial system, and privatizing SOEs.⁵ As a consequence, by the end of the 20th century Argentina experimented the dismantling of the state-owned sector of the economy.

Unlike its Italian counterpart, the study of Argentina's *corporate state* (estado empresario) and its long-term developments is yet to be explored historiographically. However, three preliminary conclusions can be drawn. First, the role of the state in Argentine economy stemmed from a melting pot of steps taken by different political regimes and governments of opposing views. As a result, while the state was heavily involved in business operations, no consistent, coherent plan may be said to have been in place to promote Argentina's long-term industrial development. Second, the state's growing business engagement did not stop multinational companies from becoming a privileged player with a dominating role in Argentina's economy. Third, an unstable macroeconomic and political setting influenced companies' strategies and corporate networks. Indeed, Argentine SOEs lacked any active networking strategies (with the exception of SOMISA). It should be noted that in a volatile political and economic context, overhauls of SOEs' boards and administrators were frequent, usually due to changes in economic policies or ruling interests. This further undermined the possibility to pursue effective networking strategies.

5. The syndics

This section presents a taxonomy of syndics in Italy and Argentina. Understanding who the syndics were, provides evidence about the companies' strategies to select them and the historical "uses" of this institution (sindicatura), despite what the law explicitly established, in both countries.

We can identify three categories of syndics: "Multiple", "Hybrids" (Syndics-directors) and "pure and non-recurrent" syndics. The multiple syndics are those who hold this position in more than one company. "Hybrids" are individuals who also sit in multiple boards, but unlike the previous category, they have positions either as syndics or directors. Finally, pure and non-recurrent syndics, are the ones who act as syndics in just one company.

As we have seen, both Italy and Argentina incorporated the Sindicatura in their business law. However, the Italian law establishes the figure of "Collegio Sindicale", which consists of a board of syndics with 3 to 5 regular syndics and two alternate syndics, whereas the Argentine law establishes that at least one syndic must be included in the board of directors. These legal differences affect both the number of syndics and their distribution among the three categories (see Tables 3 and 4).

⁵80% of privatizations were carried out in 1990-1993. This process encompassed most state-owned companies, as well as other public assets that had not been managed like stand-alone enterprises before this time.

Table 3: *Syndics in Argentina*

	1914	1923	1937	1954	1970	1990
1) Firms reporting syndic's information	56	11	95	103	102	38
2) Syndics (number of positions)	61	11	100	106	123	87
3) Syndics (individuals)	55	11	81	96	108	83
4) Multiple Syndics	5	0	9	4	9	4
5) Multiple Syndics (%)	9.1	0	11.1	4.2	8.3	4.8
6) Hybrids	4	2	9	13	15	3
7) Hybrids (%)	7.3	18.2	11.1	13.5	13.9	3.6
8) Pure syndics (3-6)	51	9	72	83	81	80
9) Pure syndics (%)	92.7	81.8	88.9	86.5	75.0	96.4
10) Pure & non recurrent syndics (%) (9-5)	83.6	81.8	77.8	82.3	66.7	91.6

Table 4: *Syndics in Italy*

	1913	1927	1936	1952	1972	1983
1) Firms reporting syndic's information	1	114	120	125	124	124
2) Syndics (number of positions)	5	427	422	563	489	470
3) Syndics (individuals)	5	353	320	346	372	365
4) Multiple Syndics	0	47	55	87	83	76
5) Multiple Syndics (%)	0	13.3	17.2	25.1	22.3	20.8
6) Hybrids	2	39	30	33	31	16
7) Hybrids (%)	40.0	11.0	9.4	9.5	8.3	4.4
8) Pure syndics (3-6)	3	314	290	313	341	349
9) Pure syndics (%)	60.0	89.0	90.6	90.5	91.7	95.6
10) Pure & non recurrent syndics (%) (9-5)	60.0	75.7	73.4	65.4	69.4	74.8

Second, since the Italian law, from 1942, imposes more constraints on the professional qualification of syndics (at least 1 of the 3 syndics must be a certified accountant), we observe, from that year, an increase in the percentage of multiple syndics and a gradual reduction, although less marked, of hybrids in Italy (see lines 5 and 7 in Table 4). In comparison, the Argentine law, with fewer limitations on the professional qualifications of the syndics, has a higher percentage of hybrids for most periods and a lower percentage of multiple syndics (see lines 5 and 7 in Table 1). The situation in Argentina changes since the mid-1980s: as we have seen, in 1972 a new Commercial Companies Act was passed (No. 19,550), which was largely amended in 1983 through Act No. 22,903. Since then, the *Sindicatura* is not mandatory and syndics are required to be admitted lawyers or public accountants, with a qualified title. These changes in the law had a significant impact on the use of the *Sindicatura*, since the number of syndics substantially decreases as well as the percentage of hybrids, from 14% in 1970 to 4% in 1990. The decrease in the percentage of multiple syndics is less marked, from 8% to 5% (see Table 3).

Analyzing the biographical profiles of the syndics, we find some significant differences in the backgrounds of the individuals that compose the three categories. "Multiple syndics" are mostly members of a professional elite, whereas "hybrids" are mostly members of a business/social elite. Multiple syndics in Argentina are lawyers, accountants or former auditors. Some of them tend to be affiliated to several companies in the same industry, e.g. Eduardo Richardson is "the syndic" of the electricity industry in 1937. He serves as syndic for 5 companies in this sector. Others are trusted individuals of MNEs, e.g. Alejandro Drysdale, multiple syndic in 1954, was a well-known lawyer, confidant of German, English

and American companies (Lluch and Salvaj 2013; Sommi 1945: 337). Also, there are cases such as J.J. Waite, accountant, who was Chief Accountant in the Buenos Ayres Great Southern Railway, late at Deloitte, Plender and Griffiths, the company's London auditors (The Railway Gazette, 1920, p.p. 199). His time as an auditor at Deloitte allowed him to build a strong reputation and a diverse network of business contacts, so that by 1937 J.J. Waite was syndic on the boards of 8 companies in diverse industries.

In Italy, multiple and pure syndics are professionals: certified accountants, lawyers or consultants with a low public profile. This trait seems to become more pronounced after the enactment of the 1942 Civil Code. A remarkable example of "pure multiple syndic" is Luigi Stobbia, an accountant, who was alternate syndic Banca Commerciale Italiana (Italy's largest universal bank) from 1919 to 1920; then in 1920 became a regular syndic of this bank and retained this office uninterruptedly until 1933. In 1927 he was syndic of another eight firms: four in the electricity sector, one in steel, one in chemicals, one silk and one in agriculture. Another prominent example is Arnaldo Marcantonio. He held a university degree in economics and business administration and became a business consultant (*commercialista*) and a university lecturer in business management. In 1936 he became a regular syndic of Credito Italiano, Italy's second largest bank, an office which he kept until 1953. In 1936 he was syndic of another six firms: three large telecommunication companies (Stipel, Stet and Telve), two shipyards (Cantieri Riuniti dell'Adriatico and Odero Terni Orlando) and one shipping company (Adriatica Società di Navigazione). At the same time, he was also central manager of Iri. After WW2, he became also member of several ministerial committees and consultant of several public bodies and authorities as well as a director of several companies (Conti and La Francesca 2000). In 1972 he appears again in our sample, this time as a "hybrid". In the more recent benchmarks years "pure multiple" syndics become more low-profile and little known individuals, to probably indicate their belonging to a strictly professional elite of certified accountants and business consultants. Most – if not all – of them are "commercialisti" with a BA in economics and business administration.

We argued that "hybrids" are mainly of a business and social elite, rather than a mere professional elite. This fact is somehow shown, among other things, by their educational background. Most "hybrids" have a very high education, often a BA in engineering or jurisprudence, whereas – and differently from "pure syndics" – only a minor proportion of them have an educational background in accountancy or economics and business administration. For example, in 1913 in Italy, a remarkable example is Giuseppe Colombo, an entrepreneur and engineer, who was president of Edison (Italy's largest electricity company), and Credito Italiano (Italy's second largest universal bank), director of Officine Meccaniche (mechanical engineering) and syndic of Pirelli & C., the finance company at the head of Italy's largest rubber and cable group. Other examples are in 1936 Carlo Bobbio (BA: jurisprudence), Giorgio Valerio (BA: engineering), Enrico Ottolenghi (BA: engineering) and Tullio Torchiani (BA: jurisprudence). The first two were strongly connected to Edison – Italy's largest electricity company – of which they became managing directors at the end of WW2. Ottolenghi joined the big state-owned holding Iri since its foundation in 1933, that appointed him as syndic of several electricity companies. After WW2, Iri appointed him as a director in several participated firms. Also Torchiani started his career at Iri, but in 1954 he was appointed managing director of Bastogi, one of Italy's largest finance companies, an office which he retained until the early 1970s (Rinaldi 2006). In 1972 he still appears as a "hybrid" with 8 positions as a director and one as a syndic. In 1983 the "hybrid" with the

highest number of positions is Enrico Gianzini (BA: Economics and business administration) a “commercialista” strongly embedded in the Milan business community (Badon 1995).

As in Italy, a common trait of relevant Argentine “hybrids” was that they belong to the traditional social or business elite. Most of the “hybrids” were members of traditional Argentine families, founders of business groups or trusted partners and managers –many of them recruited in Europe – of local groups or MNEs. Up until 1954, many were foreign businessmen or Argentine entrepreneurs of foreign origin with strong ties to their ancestors’ communities. This trait illustrates the significant role played by immigration in the creation of Argentina’s corporations (Lluch and Salvaj 2015). An exemplary case of “hybrid”, in 1914, is Sir Hillary Leng, born in UK, entrepreneur, head of the British community in Argentina for two decades and connected with the traditional elite. He founded the firm Leng, Roberts & Co. and represented the house of Baring Brother in Argentina and later also that of JP Morgan of New York. This firm featured broad investment diversification and was involved in the ownership and management of banks and financial firms with direct ties to European banks, also serving as liaisons among European investors and Argentina’s market (Lluch and Salvaj 2015). In 1954, a central “hybrid” in the corporate network was Eugenio Castelli, an Italian engineer, industrialist and financier that studied in France, Switzerland and England and was associated with the Italo-Argentinean business community (Lluch and Salvaj 2012). Another example is Tito Arata, who in 1937 was affiliated at 3 electricity companies, a tramway company and a firm related to Tornquist’ business group. Arata was a conservative lawyer, journalist, professor and government official, member of the traditional social elite and president of “Círculo de la Prensa” (Who’s who in Latin America. Argentina, Paraguay and Uruguay 1950). Finally, some “hybrids” were shareholders and/or family members of local business groups like Pedro and Emilio Soulas, Cesar Bunge, Carlos Menendez Behety, Alberto De Bary Tornquist or Alejandro Shaw.

In 1970, there is a change in the background of the “hybrids” in Argentina, since they become mostly professionals. In this period, businesspeople were less prominent as big linkers; and the most central directors were lawyers, engineers, or certified public accountants. These individuals were largely low-profile men in the late 1960s – a characteristic that, since then, businessmen cultivated as political violence grew. In Argentina’s troubled business environment by 1970, firms tended to choose to include well-connected legal and financial advisors and government officials in their boards, as these individuals knew how to navigate the changing conditions created by political and economic instability, powerful labor unions, new economic regulations, stabilization-oriented economic plans, and idiosyncratic credit allocation practices. The two main hybrids of this period were renowned professionals (in law and accounting, respectively) but were not businessmen. Alfredo Lisdero had a doctoral degree in Economics from Turin University and had arrived in Argentina in 1938. He later opened an accounting-legal firm that was retained by numerous companies with ties to the Italian-Argentine community as well as Italian MNEs investing in Argentina (for instance, Banco de Italia y Río de la Plata and Fiat). A member of one of Argentina’s most traditional families, Horacio Beccar Varela was a lawyer whose father had founded the Beccar Varela Law Firm in 1897. This law firm was a leading expert in corporate, banking and financial law and represented multiple companies, particularly foreign ones. Both Lisdero and Beccar Varela – with their different connection styles and types – seem to have been central players, forging ties between foreign companies (the former with Italian companies, and the latter with American companies) and several firms owned by local business groups (Lluch, Salvaj & Barbero, 2014). In 1990, the Sindicatura loses relevance in Argentina and the change

observed in 1970 is reinforced. There are no longer members of the social and business elite in the position of syndics, but only members of the professional elite.

6. Conclusions

The findings presented here challenge the views of the law and finance approach anticipating that, given a common legal origin, corporate networks should share similar characteristics. This study has shown that two countries sharing the same legal root – Italy and Argentina are both French civil law countries – had very different economic performance and featured dissimilar corporate network structures, Italy’s network being much more connected than Argentina’s. The long-term evolution of directors’ and syndics’ networks also proved dissimilar, although, in both countries, the lowest connectedness was reached in the most recent benchmark years. By 1983, Italy’s network declined and its structure became more similar to Argentina’s network.

This paper also have shown that Argentina’s syndics failed to adequately serve its oversight purpose, as they were embedded in board/ownership networks. Despite the debates on syndics’ failure, reform attempts proved unsuccessful, and changes were introduced only in the 1980s. Then, the syndicate became optional, to underscore its low relevance as a supervisory institution. Italy’s syndicate seems to capture better this social reality, as a collegiate body was established, with professional syndics. As a result, In Italy, two clearly distinct networks emerged: the directors’ network and the syndics’ network. By contrast, Argentina has one network, which includes directors and some clusters of syndics and this is always less dense than the Italian one. Syndics are more embedded in the directors’ network and so they do not form a proper syndics’ network.

As regards board networks, the different ownership structures in both countries and state interventions’ type and timing – rather than changes in minority shareholders’ protection – proved key to understanding them. In Argentina, MNEs played a more instrumental role in corporate networks, while, in Italy, local investors, banks and the state stood at the center of the stage. Also, Argentine and Italian corporate networks’ similarities in recent years may be attributed to the state’s withdrawal from the center of the economy. This seems to have been pushed by the rise of the technological regime of the third industrial revolution based on ICT. Regarding the low cohesion of the Argentina board networks, we have proposed that after 1950, the country’s political and economic turmoil transformed the meaning of IDs and reduced their usefulness over time. As a result of these external shocks, corporate networks underwent profound changes in every benchmark year (since 1954), prompting a complete turnaround of the network core by 1990.

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Who’s who in Latin America. Argentina, Paraguay and Uruguay, 1950.

Appendix 1

Sample characteristics and sources

The source we used for Italy is *Notizie statistiche sulle principali società italiane per azioni*, edited by the Associazione fra le Società Italiane per Azioni. The Imita.db database is an electronic version of this source.⁶ This dataset contains information regarding companies, boards of directors, boards of auditors, and balance sheets of a large sample of Italian joint-stock companies for several benchmark years.⁷ The source includes all the joint-stock companies listed on one of the Italian stock exchanges, together with those companies located in Italy whose share capital at the closure of the last balance was higher than a set threshold, which varied from year to year.⁸ On the whole, the dataset contains data on more than 42,000 companies, more than 300,000 directors and auditors, and more than 100,000 balance sheets. Representativeness, in terms of capital, is very high as the sample covers well over 90 percent of the total universe in all but the first two benchmark years (1911 and 1913) and the last one (1983), for which the proportion is around 85 percent.⁹

This paper focuses on six benchmark years: 1913, 1927, 1936, 1952, 1972, and 1983. For each benchmark year we have selected the top 125 companies by value of share capital. These have been selected according to the following repartition: 25 financials (excluding insurance companies) and 100 non-financials. Both members of the boards of directors and of the *Collegi sindacali* (boards of syndics) have been selected.

Also for Argentina we selected the top 125 companies – 25 financials (excluding insurance companies) and 100 non-financials – for six benchmark years: 1914, 1923, 1937, 1954, 1970, and 1990. However, due to data availability we used share capital as a selection criterion only for the first four benchmark years (from 1913 to 1954), whereas for 1970 and 1990 we used annual sales. Similarly to Italy, both directors and syndics have been selected.

We collected data for the four benchmark years for Argentina from the *Argentine Year Book* (1914) and *Guía de Sociedades Anónimas, Responsabilidad Limitada y Cooperativas* (1923, 1937, and 1954 issues). Data for 1970 and 1990 came from different sources, including *Guía de sociedades anónimas* (Chamber of Private Corporations, 1972), *Boletín Oficial de la República Argentina*, *Boletín Oficial de la Provincia de Santa Fe*, National Exchange Commission, Dun's 1990 *Latin America's top 25,000*, *Guía bancaria de la República Argentina* (BCRA 1954), *Bancar* (1973), *Guía General del Sistema Bancario Argentino* (1991 issue), and Argentina's Corporation Control Authority (Inspección General de Justicia). We also gathered data from stock exchange manuals, financial yearbooks, and firms' annual reports.

We have carefully standardized the names of the directors and auditors to make them as homogeneous as possible. However, we estimate that the information on our directors and syndics has a margin of error of about one percent, as is the case with other similar databases (Mintz and Schwartz 1985). These errors are mainly due to cases of homonymy, misprints, or shortcomings in the source.

⁶ Imita.db is one of the largest datasets on joint-stock companies in historical perspective in the world. For details on the database, see Vasta (2006). The database is available on line: <http://imitadb.unisi.it>

⁷ Data for companies, boards of directors and boards of auditors are available for 1911, 1913, 1921, 1927, 1936, 1952, 1960, 1972, and 1983; for balance sheets, time series are available for the span from 1900 to 1971 and for 1982 and 1983.

⁸ The threshold was set at 1 million Italian lire until 1940, with the sole exception of 1914, when it amounted to 500,000 lire. In 1952, the threshold was raised to 10 million, then to 25 in 1956, 50 in 1961, and 100 from 1964 through 1972. Finally, for the benchmark year 1983 the threshold was further raised to 2 billion lire.

⁹ For 1983, there are not enough official data on the representativeness of the sample. According to a recent estimate, such a weight could, nevertheless, reach 83.3 percent of the total of Italian joint-stock companies (Cerise 2006).

APPENDIX 2

GENERAL TABLE: ARGENTINA

Year	1914			1923			1937			1954			1970			1990		
	I	II	III	I	II	III	I	II	III	I	II	III	I	II	III	I	II	III
Sample size																		
A: Number of non-financial firms	100	47	100	100	8	100	100	82	100	100	100	100	95	86	95	102	28	102
Percentage of firms also in sample previous year				33 (33%)	?	33 (33%)	44 (44%)	?	44 (44%)	38 (38%)	?	38 (38%)	32 (34%)	?	32 (34%)	37 (36%)	?	37 (36%)
Total number of persons*	383	46	426	389	6	394	445	65	501	577	93	659	592	89	668	630	54	681
B: Number of financial firms	25	9	25	25	3	25	25	13	25	25	3	25	28	16	28	25	10	25
Percentage of firms also in sample previous year				11 (44%)	?	11 (44%)	15 (60%)	?	15 (60%)	20 (80%)	?	20 (80%)	16 (57%)	?	16 (57%)	12 (48%)	?	12 (48%)
Total number of persons*	154	10	164	108	5	113	163	16	179	160	3	161	222	18	243	195	30	224
Size of the board	5.4	?	6	4	?	4	6.2	?	7	6.8	?	7.6	7	?	8	6.9	?	7.5
Structure																		
Total number of firms (A+B)	125	56	125	125	11	125	125	95	125	125	103	125	123	102	123	127	38	127
Percentage of firms in sample previous year							59 (47%)	?	59 (47%)	58 (46%)	?	58 (46%)	48 (39%)	?	48 (39%)	49 (39%)	?	49 (39%)
Number of marginal firms (M)	24	11	26	27	4	27	30	15	30	29	5	30	35	16	37	21	5	28
M as percentage of total number of firms	19%	20%	21%	21%	37%	21%	24%	16%	24%	23%	5%	24%	28%	16%	30%	17%	13%	22%
Isolated firms (I)	40	45	37	50	7	50	35	67	29	42	91	36	65	78	47	84	33	76
I as percentage of total number of firms	32%	80%	30%	40%	63%	40%	28%	71%	23%	34%	88%	28.8%	53%	76%	38%	66%	87%	60%
I and M as percentage of total number of firms	51%	100%	50%	61%	100%	61%	52%	86%	47%	57%	93%	52.8%	81%	92%	68%	83%	100%	82%
Percentage of firms in main component	58%	5%	60%	44%	0%	47%	61%	8%	64%	60%	8%	66%	32.5%	4%	50%	16%	8%	18%
Number of components (2m)	8	0	8	8	0	10	9	0	10	14	0	14	5	0	7	8	0	10
Ties																		
Total number of lines	348	7	365	261	2	263	364	47	405	267	24	300	192	23	236	173	4	180
Total number of lines (main component)	289	3	306	175	1	182	306	28	349	213	22	255	97	6	167	49	3	55
Total number of lines (main component dichotomized)	215	3	230	119	1	123	229	28	236	137	22	171	61	6	104	28	2	31
Number of multiple lines (main component)	74	0	76	43	0	59	77	0	113	76	0	84	36	0	63	21	1	24
Number of firms in 2m-cores	40 (31%)	0	40 (31%)	28 (22%)	0	30 (24%)	44 (35%)	0	45 (36%)	41 (33%)	0	44 (35%)	11	0	18 (15%)	22 (17%)	2	24 (19%)
Density (main component)	10.8%	100%	11%	9.7%	100%	9.1%	12.21%	100%	13%	7.1%	79%	7.1%	8.2	100%	6.6%	22%	100%	17.8%
Density (main component dichotomized)	9.6%	100%	8.3%	8%	100%	7.44%	8%	100%	8.5%	4.9%	79%	5%	7.2	100%	5.5%	14.7%	67%	12.3%
Centrality/Cohesiveness																		
Diameter	6	1	6	9	1	10	6	1	6	11	1	8	9	1	12	7	2	7
Average distance	3	1	3	3.96	1	4.11	3	1	2.8	4.4	1	3.9	4	1	4.3	3	1.3	3.2
Average degree	4.7	3	5	2.7	0.2	2.7	5.8	1	6.9	3.3	0.46	4	3.2	0.45	2.2	1.2	0.21	1.4
Average degree (main component dichotomized)	6.8	3	6.1	5.2	0.5	5.1	6	7	6.7	3.7	5.5	5.8	2.8	3	4.0	2.8	2	3.9
Degree centrality (main component dichotomized)	6.8	3	6.1	5.2	0.5	5.1	6	7	6.7	3.7	5.5	5.8	2.8	3	4.0	2.8	2	2.9
Closeness centrality (main component dichotomized)	35	1.8	35	26.46	10	25.42	35.08	100	36.28	23.5	85	26.6	26.3	100	24.7	34.2	77.8	32
Betweenness centrality (nbt main component dichotomized)	2.81	0	2.69	5.59	0	5.57	2.64	0	2.36	4.7	3.6	3.6	7.9	0	5.46	11.2	1	10.7
Directors																		
Number of directors	515	55	567	478	11	489	585	81	656	709	95	791	800	107	891	805	83	885
Number of interlockers	91	5	97	57	2	59	107	5	122	94	4	108	56	9	76	35	3	56
Number of big linkers	39	1	41	21	0	21	36	3	40	35	1	39	10	4	16	14	0	14
Interlockers as percentage of directors	18%	9%	17%	12%	11%	12%	18.3%	6%	18.6%	13%	4%	13.6%	7%	8.4%	8.5%	4.3%	4%	4.7%
Big linkers as percentage of directors	8%	2%	7%	4.4%	0	4.3%	6.15%	3.7%	6.1%	5%	1%	5%	1%	3.7%	1.8%	1.7%	0%	1.6%

I = Directors' network ; II = Syndics' network ; III = Total network.

APPENDIX 3

GENERAL TABLE: ITALY

Year	1913			1927			1936			1952			1972			1983		
	I	I I	III	I	II	III	I	II	III	I	II	III	I	II	III	I	II	III
Sample size																		
A: Number of non-financial firms	100	1	100	100	91	100	100	97	100	100	100	100	100	99	100	100	100	100
Percentage of firms also in sample previous year	0	0	0	32 (32%)	0	32 (32%)	55 (55%)	53 (54,6%)	55 (55%)	49 (49%)	49 (49%)	49 (49%)	27 (27%)	27 (27,3%)	27 (27%)	31 (31%)	31 (31%)	31 (31%)
Total number of seats	1015	5	1020	1324	342	1666	995	341	1336	1207	399	1606	1097	374	1471	898	349	1247
Total number of persons*	692	5	696	854	283	1107	676	262	919	846	284	1104	857	294	1131	741	279	1011
Size of the board	10.15	5	10.2	13.24	3.76	16.66	9.95	3.52	13.36	12.07	3.99	16.06	10.97	3.78	14.71	8.98	3.49	12.47
B: Number of financial firms	25	0	25	25	23	25	25	23	25	25	25	25	25	25	25	25	24	25
Percentage of firms also in sample previous year	0	0	0	5 (20%)	0	5 (20%)	12 (48%)	10 (43,5%)	12 (48%)	8 (32%)	8 (32%)	8 (32%)	8 (32%)	8 (32%)	8 (32%)	16 (64%)	16 (66,7%)	16 (64%)
Total number of seats	341	0	341	425	85	510	311	81	392	324	104	428	385	115	500	382	121	503
Total number of persons*	323	0	323	358	84	440	259	79	334	249	95	342	320	108	424	348	110	453
Size of the board	13.64	0	13.64	17	3.7	20.4	12.44	3.52	15.68	12.96	4.16	17.12	15.4	4.6	20	15.28	5.04	20.12
Structure																		
Total number of firms (A+B)	125	1	125	125	114	125	120	125	125	125	125	125	125	124	125	125	124	125
Percentage of firms in sample previous year	0	0	0	37 (29,6%)	0	37 (29,6%)	67 (53,6%)	63(52,5%)	67 (53,6%)	57 (45,6%)	57 (45,6%)	57(45,6%)	35 (28%)	35 (28,2%)	35 (28%)	47(37,6%)	47 (37,9%)	47 (37,6%)
Total number of seats	1356	5	1361	1749	427	2176	1306	422	1728	1531	563	2034	1482	489	1971	1280	470	1750
Total number of persons*	925	5	928	1042	353	1382	851	320	1141	969	346	1280	1083	372	1422	1043	365	1391
Size of the board	10.85	5	10.89	13.99	3.75	17.41	10.45	3.52	13.82	12.25	4.5	16.27	11.86	3.94	15.77	10.24	3.79	14
Number of marginal firms (M)	14	0	14	11	33	7	11	35	6	8	32	5	22	49	13	30	55	21
M as percentage of total number of firms	11%	0	11%	9%	29%	6%	9%	29%	5%	6%	26%	4%	18%	40%	10%	24%	44%	17%
Isolated firms (I)	11	0	11	7	44	7	6	30	5	6	14	2	10	22	3	28	32	14
I as percentage of total number of firms	9%	0	9%	6%	39%	6%	5%	25%	4%	5%	11%	2%	8%	18%	2%	22%	26%	11%
I and M as percentage of total number of firms	20%	0	20%	14%	68%	11%	14%	54%	9%	11%	37%	6%	26%	57%	15%	46%	70%	28%
Percentage of firms in main component	90%	0	90%	94%	49%	94%	95%	48%	96%	95%	78%	98%	89%	63%	98%	76%	56%	86%
Number of components (2m)	2	0	2	1	6	1	1	8	1	1	6	1	3	8	1	2	6	2
Ties																		
Total number of lines	906	0	910	2000	132	2218	1010	192	1280	1511	281	1902	783	159	1004	355	146	551
Total number of lines (main component)	905	0	909	2000	120	2218	1010	146	1280	1511	263	1902	781	133	1002	354	112	549
Total number of lines (main component dichotomized)	637	0	638	1225	114	1327	684	133	827	932	235	1074	520	124	628	239	105	370
Number of multiple lines (main component)	268	0	271	775	6	891	326	13	453	579	28	828	261	9	374	115	7	179
Number of firms in 2m-cores	100 (80%)	0	100 (80%)	111 (88,8%)	48 (42,1%)	114 (91,2%)	113 (90,4%)	66 (55%)	116 (92,8%)	117 (93,6%)	90 (72%)	121(96,8%)	102 (81,6%)	62 (50%)	114 (91,2%)	79 (63,2%)	59 (47,6%)	94 (75,2%)
Density (total sample) (%)	11.69	0	11.74	25.81	2.05	28.62	13.03	2.69	16.52	19.5	3.63	24.54	10.1	2.08	12.84	4.58	1.91	7.11
Density (total sample dichotomized)	8.23	0	8.245	15.81	1.94	17.12	8.83	2.41	10.67	12.03	3.24	13.86	6.74	1.93	8.04	3.1	1.76	4.8
Density (main component)	14.56	0	15%	28.97	8%	32%	14.39	9%	18%	21.52	6%	25%	12.79	4%	14%	7.93	5%	10%
Density (main component dichotomized)	10.25	0	10.3%	17.75	7%	19.2%	9.74	8%	11.6%	13.27	5%	14.3%	8.52	4%	8.5%	5.35	4%	6.4%
Centrality/Cohesiveness																		
Diameter	7	0	7	6	11	6	7	14	5	5	10	5	6	13	6	10	12	8
Average distance	2.52	0	2.52	2.1	4.43	2.03	2.57	5.38	2.32	2.25	4.09	2.15	2.72	5.09	2.65	3.98	5.05	3.18
Average degree	10.21	0	10.22	19.6	2.19	21.23	10.94	2.87	13.23	14.91	4.02	17.18	8.35	2.37	10.06	3.84	2.16	5.95
Average degree (main component dichotomized)	11.375	0	11.39	20.76	4.07	22.49	11.5	4.59	13.78	15.66	4.85	17.46	9.37	3.18	10.3	5.03	3.04	6.85
Degree centrality (main component dichotomized)	23.51	0	23.49	37.59	14.95	39.57	28.02	11.65	29.24	33.91	8.67	34.61	26.505	6.425	24.96	7.57	9.02	11.57
Closeness centrality (main component dichotomized)	25.54	0	25.52	36.295	21.905	37.65	32.88	13.75	34.15	31.56	15.84	33.29	35.12	18.805	32.74	21.81	22.74	23.1
Betweenness centrality (nbet main component dichotomized)	7.17	0	7.17	8.81	30.91	8.75	9.59	45.22	7.69	8.39	11.12	8.74	12.52	22.08	9.84	19.56	45.18	22.39
Directors																		
Number of directors	925	5	928	1072	353	1382	851	320	1141	969	346	1280	1083	372	1422	1043	365	1391
Number of interlockers	217	0	218	283	47	354	221	55	289	248	87	347	211	83	312	151	76	238
Number of big linkers	99	0	99	135	15	162	103	21	133	116	36	159	91	22	125	47	20	72
Interlockers as percentage of directors	24%	0	24%	26%	13%	26%	26%	17%	25%	26%	25%	27%	20%	22%	22%	15%	21%	17%
Big linkers as percentage of directors	11%	0	11%	13%	4%	12%	12%	7%	12%	12%	10%	12%	8%	6%	9%	5%	6%	5%

I = Directors' network ; II = Syndics' network ; III = Total network.