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Social Capital, Creative Destruction and Economic Growth

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Abstract

A distinction between individual and communal aspects of social capital is introduced, and their roles in production explored. Contacts are required to transact. Contact formation and replacement are mediated by either market institutions or, less efficiently, by informal networks. Replacement of contacts is part of Schumpeterian creative destruction, leading to technological progress but with a negative externality. For output to increase, a 'fundamental transformation' from informal to formal contact creation institutions is required. This may be blocked if political elite interests are threatened by the externality. Growth experiences in transition and developing countries are interpreted in this framework.

Key words: social capital, innovation, growth, networks, politics, transition

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1. Introduction

A fast expanding literature on social capital discusses definitional issues (Woolcock and Narayan, 2000; Paldam, 2000; Piazza-Georgi, 2002), develops theoretical models tracing the role of social capital in a stylized economy (Della Giusta, 1999; Glaeser et al., 2002; Routledge and Von Amsberg, 2003), and empirically links it to growth and poverty reduction (Knack and Keefer, 1997; Inkeles, 2000; Krishna, 2001). The concept of social capital itself remains surrounded by major conceptual difficulties. This has led some to dismiss the construct altogether (Fine, 2001), while others urge more theoretical work to clarify the definition and role of social capital (Sobel, 2002).

Social capital is perhaps most inclusively defined as "the norms and networks that enable people to act collectively" (Woolcock and Narayan, 2000), reflecting both the individualistic and communal notions of social capital. Likewise in empirical studies, social capital is typically measured as either the number and intensity of linkages between economic actors; or as the general level of 'trust', or as the extent of civil society (Durlauf, 2002). How these individual and social levels relate to each other, and how to distinguish between them, is a major conceptual issue in the literature on social capital¹.

One view is that social capital is the social component of human capital, as in Glaeser et al. (2002). They define social capital as "a person's social characteristics- including social skill, charisma, and the size of his Rolodex - which enables the reaping of market and non-market returns from interactions with others". They implicitly concur with Arrow's (1999) point that the word 'capital' suggests a resource that can be individually accumulated, and transferred, and that hence the term social capital should not be used for attributes that cannot be accumulated at the individual level. In their analysis, Glaeser et al. (2002) essentially treat investments in social capital on a par with investments in education.

Alternatively, social capital is equalled to 'trust', 'community networks', or, more generally, some form of adherence to community norms. For instance, Robison et al (2002) argue that social capital

should be viewed as 'sympathy'. As the defenders of this argument, Bowles and Gintis (2002) argue that social capital does not equate with an individual asset, but is nevertheless a form of capital on the community level. Other critics of the social capital literature have also argued that it is overly microeconomic, and pretends to analyze social processes while adhering to traditional, atomistic models of behavior (Fine, 2001).

This basic tension about the individualistic or communal connotations of social capital is also reflected in doubts about the empirical validity and usefulness of the term. Durlauf (2002) re-analyses the evidence and concludes that "the concept itself has proven to be too vague to permit analysis whose [sic] clarity and precision matches the standard in the field" and "there are limits to what can be learned about social capital from conventional data sources". The perennial difficulty is often how and at which level social capital should be measured, reflecting the ambiguity of the term. Durlauf hence calls for sharper theoretical modeling of social capital, as well as more directed empirical work. Sobel (2002), noting the same ambivalence of the term, defines social capital as "circumstances in which individuals can use membership in groups and networks to secure benefits". He explicitly acquiesces in the fact that social capital at the moment is a "multi-faceted term". The first aim of this paper is to attempt to contribute to a conceptual analysis of social capital.

The study of social capital is motivated by its apparent relevance to income and growth. Most authors writing on social capital, however they interpret it, seem to agree that social capital is beneficial for incomes, production, and innovation. Aquilera (2002), using the 2000 Social Capital Benchmark Survey, finds that "friendship networks are generally positively related with increased labor force participation". Temple (1998) find that social capital differences explain much of the variation of growth performance among African economies. Maluccio et al. (2000) and Carter and Maluccio (2003) using a household panel data set in South Africa, find that social capital had a positive effect on per capita expenditure in 1998 and that "[h]ouseholds in communities with more social capital ... seem better able to weather shocks". Grootaert et al (2002) find that higher levels of social capital are associated with higher household per capita expenditures and better access to credit

for rural households in Burkina Faso. Buerkle and Guseva (2002) find in a study on Poland and the Czech Republic that "social capital gained while in school has an independent effect on individual income". Rupasingha et al. (2000) use regression analysis on U.S. county-level data and find that social capital has an independent positive effect on the rate of per-capita income growth. Many more such findings exist, for different settings (see also the references in Putnam, 2000). A second major question is therefore why social capital tends to bring material benefit².

In this paper the questions of the definition and the mechanisms of social capital are simultaneously addressed. A new theoretical framework for the relation between social capital, innovation, political power, and growth is developed. The arguments are presented in a non-technical format and supported with findings from the empirical literature.³

2. Decomposing Social Capital

The main conceptual idea in this paper is to decompose social capital into an individual component that is directly productive (termed 'Relational Capital', or RC⁴) and social/community networks (termed 'Communal Social Capital') and the general level of trust and adherence to norms that accompanies them, which are indirectly productive. This conceptual distinction will be used to analyze why social capital brings material benefit. In a nutshell, the argument is that Communal Social Capital helps to create RC linkages, while RC itself is directly economically beneficial through its role in transacting and innovation. RC is comprised of the contacts that economic units use in trading outputs and inputs, and in innovating. These roles of RC are discussed in detail in the next two sections. It will first be argued how Communal Social Capital is useful in producing RC.

Social networks consist of relations and can be seen as clubs, in the sense of subgroups within entry barriers within a wider population. By having restricted and screened entry, they reduce heterogeneity within the club, compared to the population at large. Within the club, members can launch searches for other members with particular economic characteristics. Effective clubs select at

entry on characteristics, such that search within that club is for certain types of players only; an example is a business association. The chances of successful search within that club are larger than in the economy at large, and its costs smaller.

The role of information is central in this. Based on the trust that develops in restricted networks (Williamson, 1985; Fukuyama, 1995), information is more easily exchanged, because "[t]hrough the economic and social relationships in the network, diverse information becomes less expensive to obtain" (Malecki, 2000). Through this information exchange, network relationships facilitate coordinated action (Putnam et al, 1993), which means reduced search costs. Communal Social Capital is not itself information, but it facilitates the exchange of information. This, in turn, reduces the costs of search and therefore the costs of creating RC.

Informal networks provide a direct route for making new business contacts, and hence the more widespread and deeper the network (i.e. the more information about each node a person has), the lower search costs are. Trust deepens the network, provides an environment for more information exchange, and thereby reduces transaction costs. These costs include the costs of explicit contracting and activation of pre-commitment devices. Both can be understood as labor costs of making RC. Hence Communal Social Capital may act as a search friction-reducing club, as Moen (1997) discusses with respect to the labor market.

Larger search clubs are particularly helpful in environments with heterogeneity, with lack of information, or with very few participants - conditions typical of developing and transition economies. Heterogeneity causes high labor cost for searching and offers lower chances for succeeding to find productive linkages. If these costs are prohibitively high, the search process stalls and no new RC linkages can be created. Communal Social Capital reduces these search costs and may thus solve the problems.

It is important to emphasize that Communal Social Capital is conceptually different from, but overlapping with, RC. Its main role, in this account, is to aid the production of RC. But there is some overlap: one benefits from others' economic linkages because a productive contact is often also an

informal search channel itself. There is then a search externality from the creation of more RC, in parallel to the classic Diamond (1982) argument of thick markets - if there are many economic units operating in a market, then one can expect to find a unit relatively quickly in that market. A market with many points of contact will attract more players simply because the price of finding others decreases (as also in Howitt and McAfee, 1992). Similarly, being linked up in denser Communal Social Capital networks makes it less costly to search for RC linkages.

3. Relational Capital: Tool for Transacting

RC increases output in two ways. It is an input in sold output, and as such indispensable for profitably producing, as explored in this section. Moreover, the replacement of old contacts by new ones is a prerequisite for technical progress, as we argue in the next section.

RC is an input in the *sold* output of a representative unit. The sale of outputs and the purchase of inputs are part of the productive activity of a unit, following the New Institutional literature (Williamson and Masten, 1999). Apart from subsistence production, output that cannot be sold has hardly any economic value, and will not be produced in the first place. Likewise, inputs that cannot be purchased cannot be used in the physical production process. To sell outputs and buy inputs, contacts with suitable trading partners need to be established and maintained. If contacts are necessary to buy and sell, then RC is a necessary input into sold output. Having more contacts allows increasing specialization, which brings advantages of economies of scale and of the deployment of comparative advantage. The more contacts, the more outsourcing is possible. In essence, this paper is an attempt to trace the implications of these simple facts⁵.

To pinpoint this first role of RC, it is useful to literally consider it as a capital: an input in the production process (as also in Westlund and Bolton, 2003; Robison et al, 2002; though note that these authors lump together individual and communal aspects of social capital). Within a conventional

production function approach⁶, physical production depends on inputs of conventional capital and net total labor; but *sold* capital depends on RC. Total labor is allocated to either the production process, which is blue-collar labor, or to the creation of RC, which is white-collar labor. Other than this division of labor, no special assumptions are made about the production function, which can be thought of as a constant-returns-to-scale function with all the usual Inada-properties. Any input faces decreasing positive marginal returns and is technically complementary to any other input. In terms of the production function analogy, it is posited that the production function takes the form

$$y = f((L - L^r), K, RC, A),$$

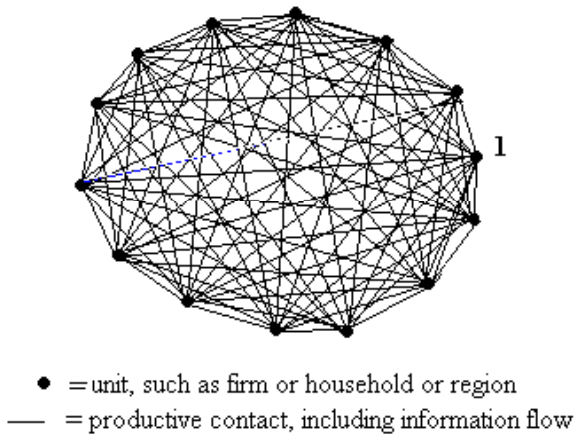
where y denotes the sold output of a unit, A denotes the quality of the technology used, L^r is the amount of labor that is used to create and replace RC and $L - L^r$ is the remaining productive labor. That is, RC is a separate input in sold output. Labor has to be used for production as well as for the managerial function of RC creation and replacement⁷. This also implies that there is a trade-off between labor used for physical production and for the creation of RC, with the amounts depending on returns to both activities.

It is important to briefly point out two key assumptions behind the assertion that it takes labor to find contacts. These assumptions are that business partners are heterogeneous (hence one must search for the right one), and that there are search frictions (hence the search costs time). Parties cannot easily find other suppliers and clients once a relation is discontinued, because they can only buy their inputs from specific groups and sell their output to other specific groups. RC creation is therefore the white-collar complement of physical production; it is "what managers do", both within and between organizations.

These assumptions link in with a New Institutional view of markets. Finding contacts incurs transaction costs for information search and sharing, bargaining, and defining property rights (North, 1990). This heterogeneity is also basic to all models with search frictions, although usually not modeled explicitly (e.g. Pissarides, 1990). The departure from the standard homogeneous atomistic market model comes in because units operate in *networks* (not disconnected sets) of *heterogeneous* (not

identical) units. To illustrate, Graph 1 depicts the ideal type of a perfect market, conceptualized as a fully connected graph.

Graph 1: The Perfect Market



In this ideal type, all units in a market are in (latent) contact with all others. In the graph, productive decision making units are depicted as dots and have represented information and potential productive flows (inputs, outputs) as lines. In perfect markets, there is full information in the sense that all productive opportunities are known and can

be explored without any frictions. This graph is merely intended as a benchmark illustration. The present approach deviates from this ideal type, as will be showed below.

4. Creative Destruction: Innovation is Painful

As noted, a second role of RC comes in via the argument that innovations need the destruction and replacement of some relations. Technological progress involves changing the production process. This involves new clients and new suppliers. Adopting new technologies or new market partners therefore renders some of the previous contacts obsolete. These have to be replaced.

Also this function of RC can be understood in terms of a production function approach, where the technology parameter \mathcal{A} reflects the gap between its technology and the best technology available (the 'technological frontier'). Through replacing old contacts with new ones (RC replacement), units are able to approach the technological frontier. This frontier itself is exogenous; it is the gap between the unit's technology and the frontier that decreases due to RC replacement.

There is empirical support from various settings for the view that RC replacement accompanies rising productivity. Pavcnik (2000), using plant-level panel data on Chilean manufacturers, finds

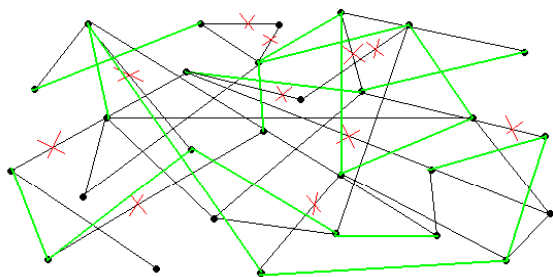
evidence of within plant productivity improvements following the Chilean liberalization of the early 1980s, which she attributes to "the reshuffling of resources and output from less to more efficient producers". Grant (2001) presents evidence from primary and secondary data on reallocation of enterprise contacts in Ghana as a means to achieve innovation. Lall (1999) concentrates on the difficulty to find appropriate replacements, she researches the garment industry in Kenya, Tanzania, and Zimbabwe, based on firm-level data, and finds technology upgrading and improving firm performance at a time of import liberalization, which brought new business contacts into the Chilean market. Murphy (2002) finds that social networks of business people in Tanzania support innovation in manufacturing firms - we would argue that this is so because these networks help them search for the replacement of former business partners. Cooke and Wills (1999) find that a sizeable proportion of firms in samples from Denmark, Ireland and Wales (U.K.) report that "social capital building was associated with enhanced business, knowledge and innovation performance". De Haan (2001) researched a project to disseminate improved goat breeds in Tanzania, and found that "internal [village] processes are crucial in understanding technology transfer... a person's social capital did determine whether a member got a goat" (i.e. could implement the technological innovation). Finding, without high costs, the right contacts to replace obsolete ones, is vital to innovation.

The destruction of old contacts and old ways of organizations in order to find better technologies is 'creative destruction' - in line with Schumpeter's view that invention and innovation are crucial to economic advancement. "The carrying out of new combinations we call 'enterprise' " (Schumpeter, 1934:74).⁸ Creative destruction is comprised of many small advances made by large numbers of units.

This RC replacement carries an externality as it implies destroying old relationships. While the amount of own RC remains constant for the unit doing the replacing (one old contact is replaced by one new contact), the former business partner's RC diminishes. If this business partner depended entirely on this contact to survive, it may have to close down, thereby destroying all contacts of units it deals with, who in turn face the same problem. But also if it can replace the old contact with a new

one, it will inflict an externality on a third unit. In sum, this externality is inevitable and generates an economy wide impact (loss of contacts) of any unit's RC replacement. Thus, RC replacement may be individually rational but collectively harmful.

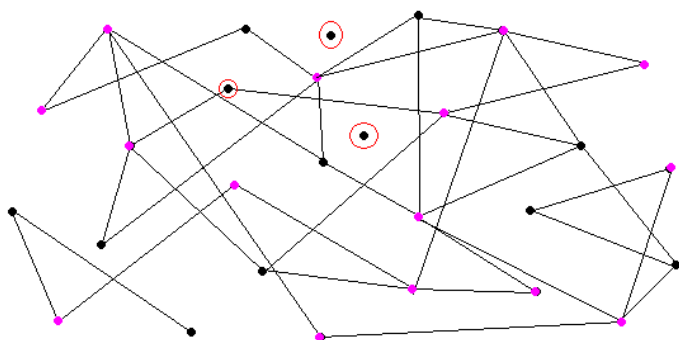
Graph 2: Contact formation and destruction



Again, this can be usefully illustrated by graph theory. Graph 2 provides a representation of real markets. The dark lines represent links initially established. In contrast to the perfect market, not all units are connected to others and there are unexplored opportunities. The crosses

denote a contact that is severed by one of the previous partners who now has started a new productive contact with another unit, which is denoted as a light line. The units initiating the break, gain by achieving a technological upgrade (which forces them to abandon the old trading partner). Those not initiating the breakaway but losing a contact, suffer a negative externality. Apart from this creative destruction, there are also new contacts being formed that do not require anyone to break up with former partners and thus only creates gains. These are expansions of existing activities without technological progress.

Graph 3: The new network – winners and loser



Graph 3 shows the net result of these activities. The light dots are those units that have experienced a net gain in contacts due to creative destruction in Graph 2. The dots with circles are units that have lost out.

How large this loss is depends on whether a unit is part of a large chain of units whose production depended on it. In a relatively centralized economy, where such chains of dependence are long, the collateral damage from RC

replacement may be large. If production chains are short, as in a decentralized economy, the damage will be smaller.

Within this framework, consider two factors that are pivotal in innovation and growth. First is the conversion rate of (white collar) labor into relations. In terms of the search literature, this can be interpreted as the arrival rate of contacts. The circumstances that affect contact and destruction rates in search theory (as presented in Ashenfelter and Layard, 2000) would seem to carry over to the conversion rate of (white collar) labor into relations: greater geographic or cultural distances and more complex and specific production all decrease it. The next section argues that an economy wide increase in this conversion rate is key to economic growth, and that market institutions greatly increase this conversion rate.

The second factor is the cost one unit incurs when it breaks a contact with another unit. This is also likely to vary over different socio-political settings. Section 6 argues that the degree to which the political process in a region attempts to frustrate the destruction of contacts is a key determinant of the prospects for innovation and growth in developing economies.

5. Growth: Market Institutions Replace Communal Social Capital

One essential feature of a growing economy is the rate at which RC is both created and replaced, which are both linked to the rate at which labor is converted into contacts. A low-growth economy can accelerate by updating technology, which requires that the replacing of RC also accelerates. It can also accelerate growth by increasing (not replacing) RC. Both depend on a decrease in the time needed to create contacts. Institutions that either directly form a conduit for finding new contacts or promote them indirectly by quality monitoring facilitate such faster conversion. Thus, for economies to experience a sustained high-growth, market-based development path, inefficient search institutions such as Communal Social Capital (informal networks and trust) need to be replaced with more efficient (typically formally defined) market institutions. In the absence of well-developed market

institutions, Communal Social Capital may reduce search and monitoring costs, compared to the counterfactual of no search devices at all; but they can do so only up to a point. This is why a “fundamental transformation” from informal to formal institutions for RC creation and replacement is a prerequisite for growth.

This view, which will now be argued in detail, implies two assumptions. First, that formal market institutions on the one hand and Community Social Capital on the other hand are (at least partly) substitutable. Second, that this substitution is not merely possible; it is necessary for a high-growth, market-based economy to develop.

First, let us consider some empirical evidence. Katz (2000), in a comparative analysis of two regions in Guatemala, shows that "the existence of social capital can substitute for well-defined legal property rights in both private and common property resource tenure regimes". Wallace (1999) analyzing small-scale cross-border trade in Eastern Europe, concludes that "in a risky environment, where trading is either illegal or only semi legal, small-scale traders try to minimize risk by building up different kinds of relationships with customers, representatives of the law and partners in trade. In the absence or inadequacy of formal institutional regulation, informal regulation through social capital becomes important". Ferrary (2003) shows by an analysis of financial counselors' practices how lack of formal creditworthiness information leads them to establish more intensive social bonds with loan applications and borrowers, which then become an alternative channel for monitoring and information collection. Bowles and Gintis (2002) argue that "community coordination" improves good governance by "addressing market and state failures". Winn (2002) reports that social networks in Chinese society have survived the growth of formal legal institutions and liberalization of China's economy, but also that they are currently under pressure from the spread of electronic commerce technologies which strengthen legal institutions and open local markets to international competition.

All this suggests that informal mechanisms which these authors term social 'capital', 'networks', 'bonds', and 'relationships', are used for the same purposes as formal market institutions such as 'well-defined property rights', 'informal institutional regulation', 'creditworthiness information', 'monitoring

and collection of information' and 'formal legal institutions'. These studies show that agents substitute one for the other as circumstances dictate - using market mechanisms where possible and informal institutions where necessary⁹. They can do so because both are alternative ways to perform "search, select and sort" functions. It has already been explained how social networks do this: by acting as search clubs, reducing search costs and facilitating RC contacts creation. It will now be shown that fundamentally, market institutions do it much the same way - in fact, the argument is that this similarity is why they are substitutable, as the empirical literature quoted above suggests.

Firms and households on markets are heterogeneous (e.g. in their credit-worthiness or reliability). This creates free-riding behavior of low-quality units on the existence of high-quality suppliers or clients, as Akerlof (1970) has shown. Other things apart, this information asymmetry would prevent efficient search and matching, drive prices down, force high-quality units out of the market, and so "thin out" the market to the point where it collapses.

In reality, this does not happen in developed economies. Private and public institutions for quality control, monitoring and sorting generate information and divide units into more homogeneous subgroups. They overcome information problems. Private solutions include banks, which monitor creditors and lenders. Public institutions include courts and Chambers of Commerce, which screen new members. Other institutions can be either public or private: credentialist systems (e.g. education certification), food standard agencies, and the like. Hence both public and private market institutions are like search clubs - just as Communal Social Capital networks, such as those of civil society and kinship.

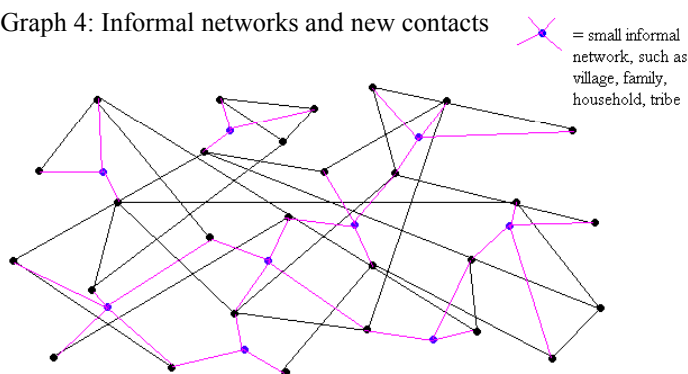
The essential characteristic of these and other market institutions is that they a) are universal in that they aim to cover all units, b) are specific in that they deal only with a very specialized subset of possible productive connections, and c) have economies of scale in that each extra connection leads to a more than proportional increase in the number of possible trading opportunities: by linking to one market institution one benefits from all connections in the network. The economies of scale typical of market institutions are the reason they can only appear if the market is sufficiently large.

Scale economies, and associated larger efficiency, also explain why market institutions crowd out Communal Social Capital networks over time, as they gradually take over their economic role.

The relative inefficiency of Communal Social Capital networks implies that its replacement is required for market-based growth to take off: formal institutions exhibit far larger increasing returns to scale in monitoring and sorting. For instance, an informal lender can, through her contacts, know about and assess perhaps twenty borrowers, and link them to a similar number of lenders. Commercial banks can have portfolios of millions of borrowers and lenders. The number of RC linkages (as between borrowers and lenders) that a single market institution is able to create is typically many times that attained by informal institutions.

Again, it is helpful to think about the differences between Community Social Capital and market institutions in terms of graph theory. In graph 4, an informal network is depicted as light lines, in

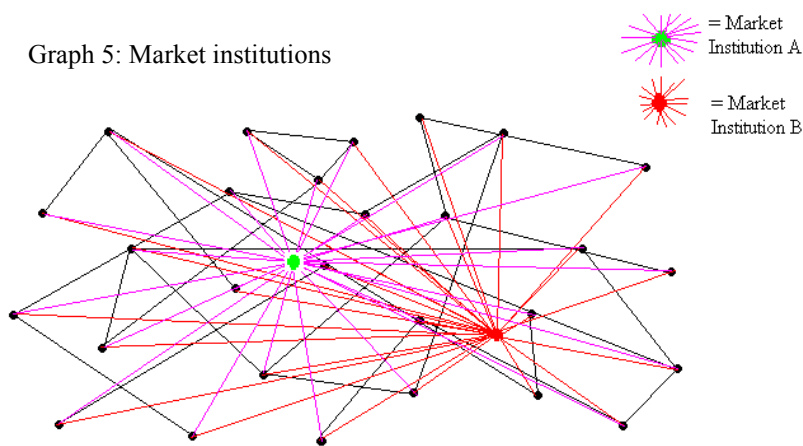
Graph 4: Informal networks and new contacts



addition to RC linkages depicted as dark lines. The search for more productive contacts occurs via these informal community networks. This is why social capital is productive: the more there is of it, the faster productive units can find

new RC contacts with others. Informal networks are limited and local and thus do not enjoy economies of scale; graph 5 depicts, in contrast, a situation with two market institutions. These institutions connect every market party with every other market party, but they only convey very specific information. This network of linkages is more efficient, but not multi-functional, as Community Social Capital is.

Graph 5: Market institutions



This, then, is the argument why growth requires that impersonal market institutions replace personalized Community Social Capital. One cautionary remark is in order. The simplistic

conclusion from this would be that any attention to social capital in growth policies is misplaced; one must simply build market institutions. This is a mistaken view, which sidesteps the critical importance of RC for production and negates the sequencing issue connected to both RC and Community Social Capital in building market institutions.

Markets institutions will only come to be built if there is demand for them. They deliver quick and efficient contact search and matching - but who will want this unless there is a sufficient number of units in need of (better) contacts? Because formal institutions exhibit increasing returns to monitoring, they will emerge only above a threshold value of units in need of contacts, which justifies their set-up costs. There will be no demand for them until the market for contacts is sufficiently thick. Before that point, to facilitate RC creation the economy must rely on Communal Social Capital. These networks push a pre-capitalist economy to the point where it becomes profitable to introduce market institutions. Communal Social Capital networks may thus, by their effect on the density of RC, be the prerequisite to viable market institutions¹⁰. Ironically perhaps, dense initial Communal Social Capital networks may well be required for an economy to enter upon a growth path that will eventually replace those very informal networks by market institutions.

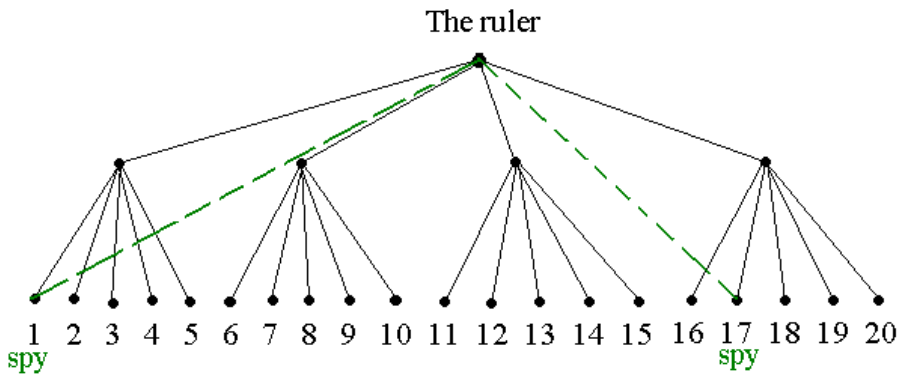
6. Markets, Meddlers and Mediators

Social and political processes are seen by many as central to explaining economic development, and to some a social capital literature that does not address the political economy of growth seems to be missing the main point (Fine, 2001). This paper approaches the interaction between politics and economic growth by a focus on the costs of replacing RC by another contact. This depends first of all again on the labor costs of finding a new contact (whether one replaces the old contact or not). Depending on the shape of the political-economic system, politicians and bureaucrats can meddle with these costs by blocking the emergence of efficient market institutions; or they can mediate in the creation of market institutions. It also depends on the cost of replacing the old contact after having already found a potential new contact: breaking up may be made to be costly not only to the unit left behind, but also to the initiator. This is expounded upon below.

There are several ways in which constraints on RC replacement may arise. Put most generally, the underlying reason for any form of constraint is that economic coordination is centralized to some degree. By this is meant that units need to interact with a third party in order to make and replace contacts. In the extreme situation of complete centralization, contacts can only be made and maintained via a third party.

Such (partial centralization) may stem from ideological motivations, such as was the case in the socialist, centrally planned economies following the Soviet model. Centralization may also occur because the political system is a dictatorship or suffers from "crony capitalism" - i.e. an economic system where access to a political elite equals economic influence. It is then very costly, say, to break up contacts with the firm of the son of the president; conversely, support from the elite is indispensable for obtaining new contacts. As these two examples suggest, the "third party" is typically part of the political-administrative apparatus; centralization, in this sense, is intimately connected with political power¹¹. Graph 6 illustrates the extreme of a dictatorship with a single ruler (or ruling clique).

Power through direct contacts and spies



The ruler rules by having direct contacts with the layer below (high officials, such as ministers, sons, army chiefs, etc.). He may also have secret connections (“spies”, in this case unit 1 and 17)

that inform him about some of the actions he cannot directly observe. In lines with Hobbes' dictum that knowledge is power, the ruler derives power from the fact that he has superior information to others, preventing them to overthrow him. This implies an incentive to avoid the development of uncontrolled contacts. Keeping a tight grip on especially the contacts of those with many contacts themselves (the high officials) is imperative to keep control over the economy. Thus, political economy considerations imply an endogenous constraint in the growth of the number of contacts in a centralized economy. All units have linkages with the ruler, but not with each other. The polity meddles heavily with the economy.

Because contacts can be used to align expectations and thus to organize politically, larger networks represent more political power. This is an externality from the point of view of the individual units making and breaking contacts: only as an entire network do they have significant power. Depending on the shape of the political system, rulers will respond to this power. Centralized systems, as the one in graph 6, suffer from a span-of-control problem in that no single entity could possibly keep track of the millions of productive opportunities that continuously present themselves. The center can therefore not mimic creative destruction, as famously argued in the 1930s Mises-Lange debate - but nor can it allow it to happen spontaneously. This continuous re-alignment of contacts dilutes its power, and changing contacts are hard to control. Moreover, creative destruction creates other losers within the

economy. With political influence of the center over the economy, the losers have an incentive to lobby the center to use its power to prevent creative destruction. Either way, in centralized economies creative destruction is likely to be curtailed. Politicians and bureaucrats actively engage in economic coordination and stop creative destruction when it hurts their economic or political interests. They can do so by punishing those units engaging in it. This amounts to raising the costs of creative destruction. Technological backwardness results.

In the opposite 'meddle-free' situation, which corresponds to the ideal type perfect market of graph 1, the costs of creative destruction are equal to the costs of finding new contacts, so that breaking up is not discouraged. The more an economy is controlled by a planner, a dictator, an elite, or a bureaucracy, the higher the break-up costs are, and the larger the wedge between costs of replacing RC and costs of adding RC - that is, the larger the disincentive to innovation, compared to continuing with existing production methods and outputs. Another way to see this is to note that official or implicit centralization is a reflection of poorly defined property rights. With dictators or crony economic elites, ownership over resources, including RC, can be re-allocated at any time by those in power. Destroying an old contact creates losers who can alert politicians to an opportunity for expropriation. Centralization thus makes it worthwhile for units to lobby the political center not to allow creative destruction by other units. Adding contacts whilst not destroying old ones does not generate losers. Uncertainty over property rights thus discourages investment in RC generally, and discourages replacing old contacts in particular. Technological backwardness and impeded growth result.

Some empirical facts support this view. First, in the literature on command economies the technological lag is often cited as a major reason for their collapse (e.g. Gros and Steinherr, 1995; Aslund, 2002). Also many developing countries have dictators and crony economic elites, and are technologically backward. In the present approach, these two general features are not unrelated.

Second, lobbying by enterprises for state intervention against competitors was indeed prevalent in socialist systems (Braguinsky and Yavlinsky, 2000) as well as in the, as yet, incompletely

decentralized transition economies. As Maitland (2001) shows for the case of Vietnam, abuse of public office there takes the form of "a distortion to property rights, including the re-assignment of private rights as the result of lobbying or rent-seeking activities." Lobbying is pervasive also in many traditional developing economies (Rama, 1993). Thus, politicians' interference with firm level decision making invites firms' reliance on politicians to deal with their competitors, and an unhealthy symbiosis may develop.

Real economies are somewhere on the spectrum between total central planning (Graph 6) and the benchmark 'meddle-free' economy (graph 1). In the more developed and decentralized economies, political meddling with property rights is restricted; where present, it takes more covert forms. In East Asian capitalist and (nominally) democratic countries, enterprise ownership is often held by families, which in turn are typically well-connected to the political system; the Indonesian Suharto regime was one example. Faccio et al (2001) find that outsider shareholders in East Asia are effectively expropriated by dividends paid out to owning family members.

Thus, this paper argues that reform towards removing politics from a direct say in individual enterprises is central to economic development. It also suggests that reform may be politically hard, as firms and politicians in crony systems exist in symbiosis. Political-economic reform changes the nature of the system, rather than merely improving its performance. This suggests that reform is more complex than just implementing a switch to a better growth path, as many models of development treat it. Specifically, it is likely that due to the externalities of the choices of individual units, changes in constituent part of the system may lead to either endogenous decline or growth. Some possible outcomes are traced in the next section.

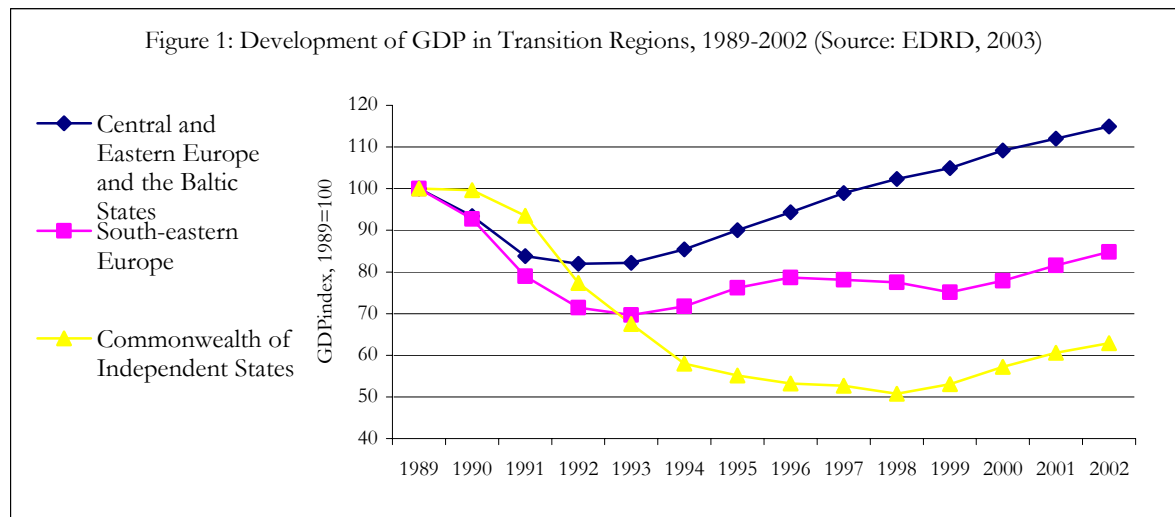
7. Liberalization and Growth: Pain or Gain?

The prescription for successful economic development that has been most popular over the last few decades has been that of 'market liberalization' of some sort. Broadly speaking, this comprises the

introduction of more competition and of more decentralized decision-making. While this recipe is in line with the recommendations following from the present framework, its effects are more ambiguous than a straightforward 'free market' approach would suggest. Successes as well as disappointing results - e.g. in terms of growth - from liberalization policies are often observed. As one application of the present framework to the study of economic development, it will now be shown how the outcomes of market liberalizations can be accounted for.

The two factors that, in the present approach, give a handle on systemic change are: the rate at which labor is converted into RC, and the cost a unit incurs when it breaks contacts with another unit. In a perfect market, both these costs are zero. In an ideal-type capitalist system, there would still be a non-negligible positive rate at which labor is converted into RC, but there would be no additional cost of breaking old contacts; they are fully external to the unit doing the RC replacement. In an economic system where politicians or bureaucrats can punish units for breaking up contacts, the costs of doing so are positive, and possibly prohibitive.

It is assumed that the economy starts in a situation with relative high costs for RC creation and almost impossible RC replacement. This stylized characterization represents types of economic systems without Market Institutions - both highly centralized economies and underdeveloped, largely informal economies - which are subsequently exposed to a market liberalization shock. Such a 'big-bang' systemic change can be represented as a one-off unanticipated decrease in the cost (punishment) a unit incurs when it breaks contacts with another unit. Overnight all political control on RC replacement is removed. This happened most clearly during the post-communist transitions in the former Soviet Bloc, where previously all economic decision making was centralized, including enterprise matches. The start of reform led in all 27 transition countries to a fall in output during three to eight years, a fall "never before experienced in the history of capitalist economies (at least in peacetime)" (Mundell, 1997). Figure 1 illustrates.

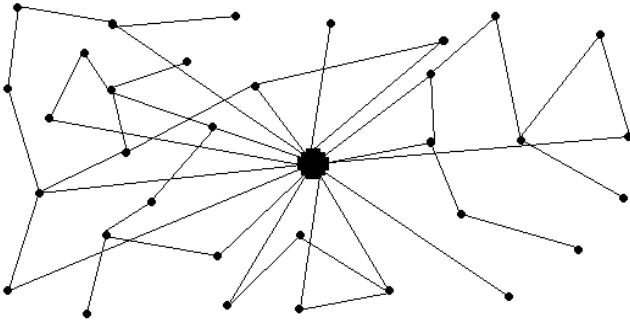


More generally, Greenaway et al (2002) survey the experience of 73 developing countries, which implemented 'deep' market liberalization programs over the last two decades. In a panel data analysis, they demonstrate that market liberalization is typically followed by a J-curve or U-curve output response over time: output falls steeply initially and recovers afterwards. As with the case of post-communist transition, this was an initial surprise to analysts, since the 'freeing up of market forces' was generally expected to lead to immediate output gains.

Using the framework here developed, it is straightforward to account for this experience, with no special additional assumptions¹². If units are operating under technologically backward conditions (as in the former Soviet bloc towards its end) and are prohibited from replacing their business contacts, they have large incentives to engage in creative destruction, but cannot do so. Sudden removal of this prohibition triggers large-scale creative destruction. As showed, this is individually rational but can be collectively harmful in the short term, especially in economies that are highly centralized, and where long chains of units are interdependent. The result is a large net loss of RC initially, and a concomitant decline in output. Because of complementarities, it is accompanied by a reduction in the marginal value of other production factors labor and capital. This concurs with observed increasing incidences of poverty and capital flight after market liberalization measures, of which the post-socialist transition is again an extreme example. Over time, progressively smaller RC losses and increased technological levels in the surviving units due to the creative destruction they

implemented start to counter this trend. Eventually this leads to growth levels higher than pre-reform, due to faster catch-up towards the technological frontier. In graphical terms similar to the ones introduced in section 4, a 'transition' can be depicted as below.

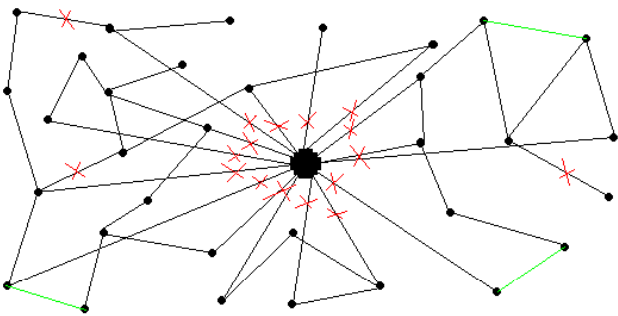
Graph 7: A centralised economy before liberalisation



In Graph 7, the big dot in the middle denotes the planning apparatus that controls most contacts in this economy, though not all. The remaining contacts are not only those in the illegal economy, but also those tolerated by the center.

During a big-bang liberalization the center breaks all ties overnight or it simply disappears, or loses its power to enforce contacts, leading to large-scale destruction of contacts. This is denoted by the crosses in Graph 8. Simultaneously, there is some new growth in contacts depicted as light lines.

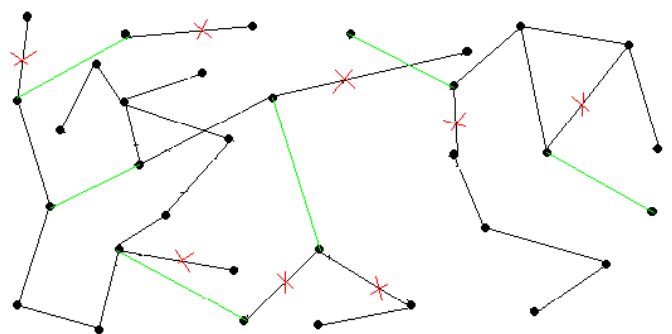
Graph 8: A 'big bang' transition



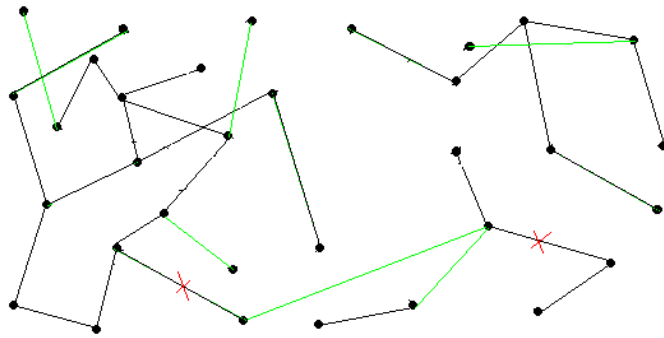
This is however a period of large initial economic downturn. As this process continues, there is much creative destruction because of the activities of individual units breaking away from old partners to form new relations (Graph 9).

There is also some new contact growth, but not enough to compensate. At some point the economy stabilizes, and then expands, as growth outpaces destruction of contacts. Growth results from improved technology, itself resulting from the large-scale creative destruction (Graph 10).

Graph 9: Extensive contact replacement and output decline



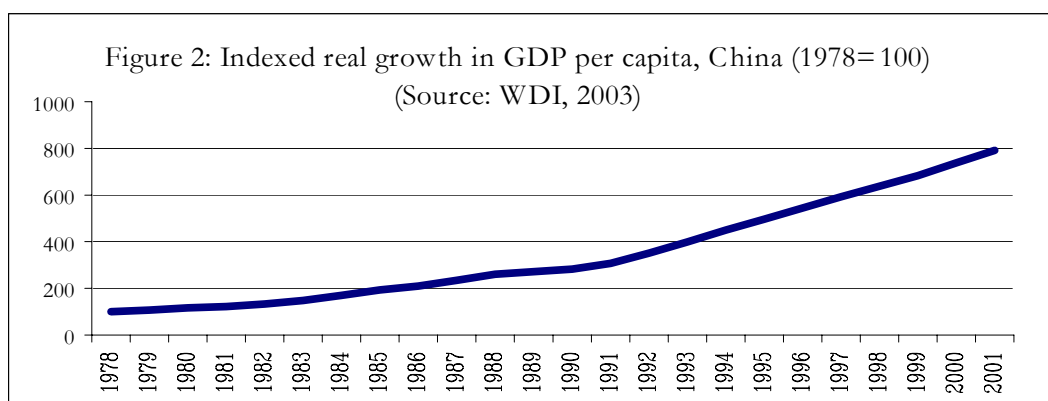
Graph 10: Less contact replacement – recovery of output



Is there an alternative to the particularly painful creative destruction of big bang reforms? A dual-track approach, where unit decision-making is decentralized but some restrictions on the mobility of labor and capital are maintained, appears successful in mainland China (Tian,

1999). As Roland and Verdier (2003) comment, such "dualism follows the scenario of Chinese transition where the government keeps direct control over economic resources and where a liberalized non-state sector follows market rules". The Chinese experience is a way to restrict the actions of a sizeable proportion of the units in the economy, allowing only a fraction to engage in creative destruction, hence avoiding an accumulation of the external effect, and achieving smoother growth. Furthermore, as Lau et al. (2000) point out, the dual-track approach provides agents "being replaced" because of liberalization with rights to claim compensation. Thus only efficiency increasing contact replacements take place and replacing firms internalize the externality. This is one example with fits into a wider literature on the critical importance of sequencing to the success of market reform policies (started, for transition economies, by Dewatripont and Roland, 1995). We already touched on this in section 5.

Figure 2 depicts per capita growth in mainland China since the start of its reform in 1978. The contrast with the experience of other reforming economies of the (post) centrally planned type is striking. However, as the approach in this paper would suggest, this reform also threatens the symbiosis between politicians and firms; in China, political decentralization pressures accompany the economic reforms, and it may well join the club of *post*-communist reformers in the foreseeable future.



8. Summary and Conclusions

This paper provides a framework for the economic role of social capital. As its centerpiece, the notion of Relational Capital was introduced. This captures the importance of contacts to the generation of incomes from entrepreneurship and employment. Informal, personalized social networks, termed Communal Social Capital, aid the formation of RC contacts. Growth vitally depends on acceleration in creative destruction, where new contacts can be created through market institutions rather than via informal networks, termed Communal Social Capital. In the spirit of Schumpeter, it was argued that in capitalist economic systems, the destruction of some contacts in search for better ones is an integral part of technological advancement. There is a negative externality to creative destruction, which implies an incentive for other units and, possibly, the state, to hinder it.

Many politically controlled economies restrict such creative destruction, which, it was argued, leads to their technological backwardness. When such economies liberalize in a 'big-bang' fashion, they are likely to experience an initial output fall: technological catch-up implies high levels of destroyed and replaced relational capital. This not only has high direct opportunity costs (more labor is used for the production of relational capital) but also leads to a loss in overall Relational Capital, since there is a negative externality of creative destruction. This paper thus both explains the post-reform output collapse in all transition economies, and leads to support for dual track approaches as currently in China, where systemic change is complete but only for a subsection of the production

factors. It also holds lessons for other developing and emerging economies pursuing growth via market liberalization policies

The paper adopts a nuanced view on the role of social capital in development. Economic growth is predicated on increasing and improving the stock of relational capital, or productive contacts. Community Social Capital aids firm and households in an underdeveloped economy to create relational capital, which in turn may lead to the formation of market institutions; but it is these market institutions that must then start to replace informal social-capital networks in their role of forging and renewing business contacts. Reliance on Community Social Capital should not be promoted as the main development tool, as is currently fashionable among many development NGOs and donors (as documented by Fox and Gershman, 2000; De Haan, 2001). But neither can one dismiss the role of community social capital in the development towards a market economy (as in Harriss and De Renzio, 1997). Social networks spur the initial growth in relational capital that leads to the profitability of market institutions. These, in turn, crowd out the same social networks from the economic sphere.

This paper's approach, and the breadth of phenomena it aims to cover, may strike some readers as ambitious. Nonetheless many limitations remain. In its theory, the paper concentrated on the entrepreneurial and productive side of the economy and the role that two components of social capital play. Many issues that affect the transition, development, growth and innovative activity in an economy were left out, including education, international integration, regulation, migration and the financial/monetary environment. These are beyond the scope of this study. In its applications, only the experiences of transition countries were considered, while a broader relevance to liberalization policies or structural adjustment programs in general was suggested. In future work, the aim is to develop this application.

Notes

¹ Killerby and Wallis (2002) provide an historic overview of that literature.

² Note that we do not ask why social capital tends to increase well-being, as is also frequently found (Killerby and Wallis, 2002). There obviously may be such a 'warm-glow' effect of social linkages; we focus exclusively on its material benefits.

³ Bezemer et al. (2003) and Frijters et al. (2003) illustrate the present considerations using formal models and simulations.

⁴ Frijters (2000) introduces a related concept of relational capital on the firm level and analyses the consequences for the wage and age structure of employees within a firm.

⁵ These arguments are particularly relevant in situations of economic transition and development, where transacting problems often constitute the main barrier to enterprise development. The RC concept is also implied in transition models, such as those of Blanchard and Kremer (1997) and Roland and Verdier (1999), where firms need relations to achieve sold output.

⁶ See Bezemer et al (2003) for a detailed technical explanation of this approach.

⁷ Frijters et al. (2003) provides a formal presentation of our arguments.

⁸ Westlund and Bolton (2003) also link social capital to Schumpeterian entrepreneurship functions. This papers' notion of creative destruction is not related to the *neo*-Schumpeterian literature because it does not explicitly model monopoly rents. Given that this paper focuses mostly on small advancements, the use of the term best fits Schumpeter Mark I technologies.

⁹ Unsurprisingly, then, the onset of market development has its social costs. Social networks lose their economic function, and, if they are not supported by other functions, may disintegrate. Some argue that there is a trade-off between "group behavior and [economic]development", and that "the market destroys co-operation" (Heyer et al, 2002). Ciscel and Heath (2001) write of "capitalism's destruction of social capital". Our point is that only one aspect of social capital - Community Social Capital - is destroyed, whilst other aspects - Market Institutions - actually grow.

¹⁰ This is not uncontroversial. Harriss and De Renzio (1997) argue that "the view that rich endowment in social capitals is a precondition for 'good government' [sic] ... [is] almost certainly misconceived." Leaving aside whether government or governance is actually meant, this again points to the critical importance of unpacking social capital into its various components.

¹¹ Alternatively, firms themselves may attempt to hinder RC replacement by employees or competitors, e.g. through anti-competition contract clauses. Still, they need a legal and political environment that allows this.

¹² Concretely, it is assumed that firms maximize discounted-profits and have rational expectations after the shock.

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