QUT School of Economics and Finance

Discussion Paper and Working Paper Series

Social Capital, Creative Destruction and Economic Growth

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Working/Discussion Paper # 186a

November 2004

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Classification JEL codes: O1, O41, P51

Keywords:

Social Capital, Creative Destruction and Economic Growth

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Abstract

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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; Gleaser 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).

This paper provides a new theoretical framework for the relation between social capital, innovation, political power, and growth. The arguments are presented in a non-technical format and supported with findings from the empirical literature.[1] Section 2 reviews the current literature on social capital and argues that social capital needs to be dissected into a component that caters for its role in individual decision-making and a component that captures its status as a community attribute. Section 3 provides a graphical illustration of all the arguments of the paper. It concentrates on the links between economic agents and how these affect productivity, innovation, and power. Section 3 is also the portal to the remaining sections, where the analysis is deepened, where the results of many empirical studies are drawn in, and where various development scenarios are discussed. Section 9 concludes.

2. Social Capital: Problems and Perspectives

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 capital[2].

One view is that social capital is the social component of human capital, as in Glaeser at al. (2002). They define social capital as 'a person's social characteristics- including social skill, charisma, and the size of his Rolodex - which enable him to reap 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

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[1] Bezemer et al. (2003) and Frijters et al. (2003) illustrate the present considerations using formal models and simulations.
[2] Killerby and Wallis (2002) provide an historic overview of that literature.

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 at 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 analyse social processes while adhering to traditional, atomistic models of behaviour (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 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 modelling 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'.

This paper takes the position that one needs to unpack the term social capital into aspects that are directly productive and can thus be seen as a form of capital that can be accumulated at the individual level, and 'community' aspects that aid the creation of productive assets. This paper introduces the term Relational Capital for the productive contacts that individuals use in achieving sold output. In some essential features, Relational Capital will not differ from other forms of capital, such as money and machinery (cf. Robison et al, 2002). The term Community Social Capital and the term Market Institutions are then used for the communal aspects of social capital that are not themselves productive but that aid the production of Relational Capital.

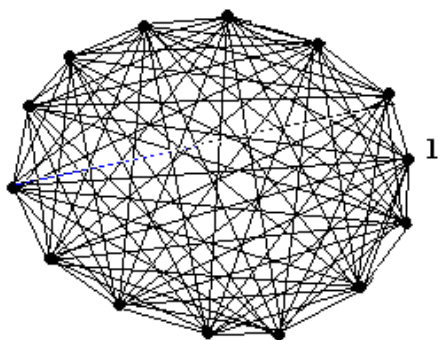## 3. A Graphical Presentation of the main ideas

The basic arguments on social capital, political economy and growth are captured in the following seven graphs. The first two are a recapitulation of existing theory. The other five present our

framework. This section is intended to present our main ideas. Subsequent sections provide links to the literature, provide further detail, and discuss implications.

Graph 1: Perfect competition

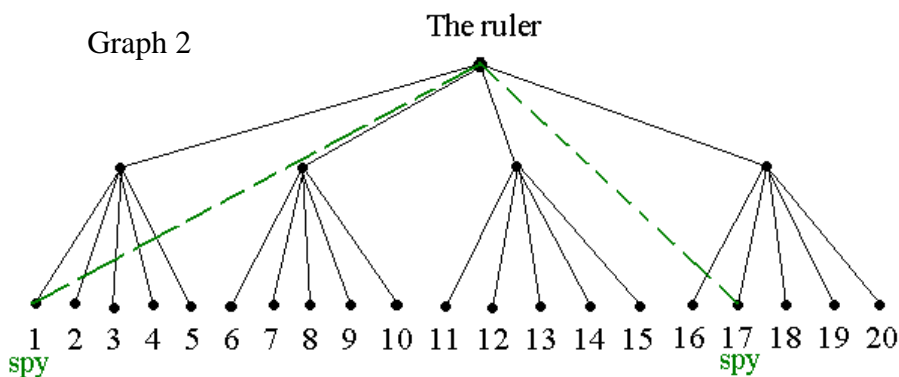Perfect competition assumes that all units in a market are in (latent) contact with all others. In the graph, we depict productive decision making units as dots and have represented information and potential productive flows (inputs, outputs) as lines. In perfect markets, there is full information in the sense that all productive opportunities are known and can be explored without any frictions. This for instance means that unit 1 could only be unemployed if its productivity in combination with anyone else is below zero (or below some benefit level that is conditional on not working). One can see a physical market in which trade takes place as precisely the same situation, i.e. everyone knows exactly what everyone else is doing and there are perfect opportunities for arbitrage. The law of one price holds and full employment of all productive factors is realized. Growth can only occur if the units themselves grow via capital accumulation.

Perfect competition as a completely connected graph

Graph 1

- ● = unit, such as firm or household or region
- ── = productive contact, including information flow

Graph 2: The political economy of contacts

Moving one step away from this ideal type, one may note that the polity may be one reason why not all contacts exist or can be used. The figure depicts the extreme of a dictatorship with a single ruler (or ruling clique). 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. The capacity to manage contacts is limited. In lines with Hobbes' dictum that

Power through direct contacts and spies

Graph 2

The ruler

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
spy   spy

knowledge is power, the ruler derives power from the fact that he has superior information to others to prevent others to overthrow him. These contacts are also economic and productive in the sense that flows of goods and services take the same route (think for example about tax receipts). 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 centralised economy.

Graphs 3-5: Growth

Consider how contacts relate to growth in a modern economy. Graph 3 shows the contacts and units

Graph 3:Contact formation and destruction
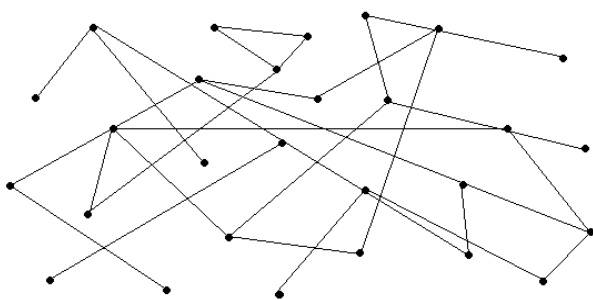
present at some initial point. In contrast to the perfect market, only some links are established: not everyone is connected to everyone else and there are unexplored opportunities. The 'stock' of contacts of any particular unit is termed its *relational capital* (RC), and they are required to secure inputs, to sell outputs, and to have an information flow. It is impossible for any isolated unit to be productive. By accumulating more contacts,

Graph 4: Contact formation and destruction
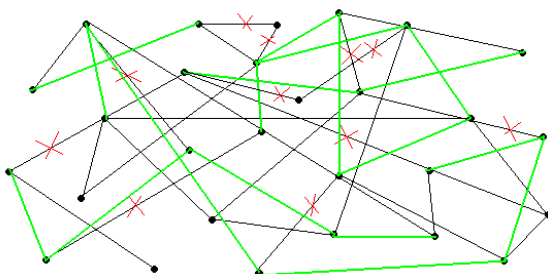
or by replacing contacts with better ones, units can become more productive. Graph 4 depicts the main productive arguments deriving from this search for better contacts. The red crosses through previous contacts denotes a contact that is severed by one of the previous partners who now has started a new

productive contact with another unit which is denoted as a green line. The units initiating a breakaway gain in terms of a technological upgrade (which forces them to abandon the old trading partner). Those not initiating the breakaway but losing a contact suffer a straightforward negative externality. Apart from this *creative destruction,* there are also new contacts

Graph 5: The new network – winners and loser
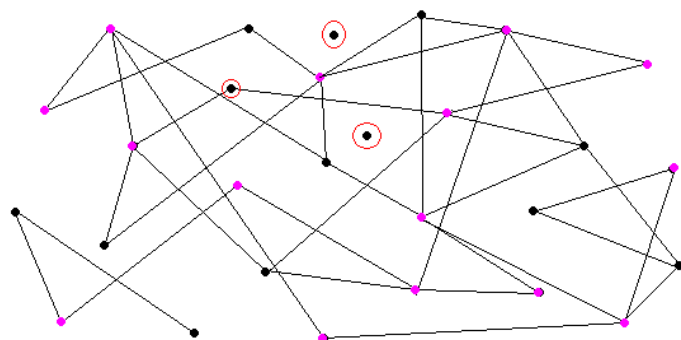
being formed that do not require anyone to break up with former partners and thus only creates gains. Graph 5 shows the net result of these activities. The purple dots are those units that have experienced a

net gain in contacts due to creative destruction in Graph 4. The dots with red circles are units that have lost out. The network as a whole has increased which means an increase in its power, because contacts can be used to align expectations and thus to organise politically. This is an externality from the point of view of the individual units making and breaking contacts because only as an entire network of 'Contact holders' do they have significant power. Now, centralized systems 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. They can therefore not mimick creative destruction, as famously argued in the 1930s Mises-Lange debate - but nor can they allow it to happen spontaneously: this continuous re-alignment of contacts dilutes their power. Changing contacts are hard to control. Moreover, creative destruction creates losers who have an incentive to try to prevent it. Either way, in centralized economies creative destruction is likely to be curtailed and technological backwardness results.

Graphs 6 and 7: The role of social capital (informal networks) and market institutions

In graph 6, an informal network is depicted as pink lines through an informal unit depicted as a blue dot (a

The role of informal networks in making new contacts
Graph 6
= small informal network, such as village, family, household, tribe
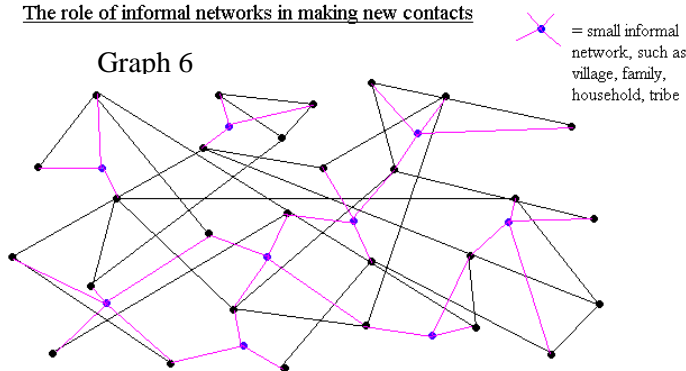
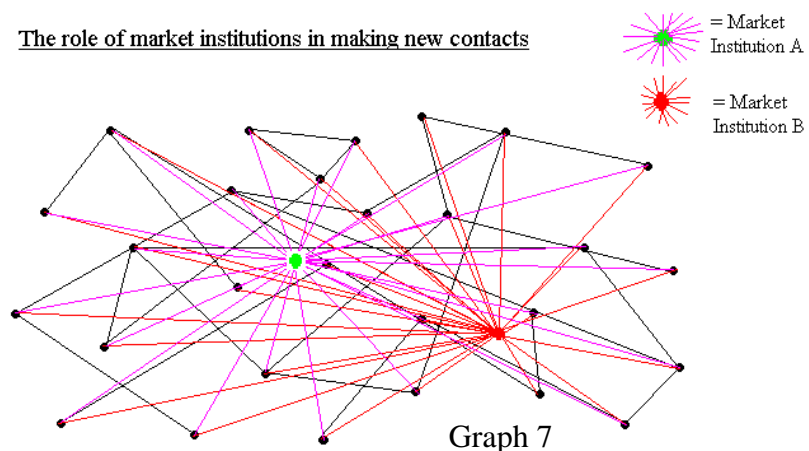unit that is not by itself productive, but is capable of producing productive contacts). The search for more productive contacts goes via these informal community networks. This is why social capital is productive: the more there is of it, the faster productive units can find new contacts with others. Informal networks are limited and local and thus do not enjoy economies of scale. In the graph 7, we have depicted a situation with two market institutions. These institutions connect every market party with every other market party, but they only convey very specific information. They allow any two market parties to recognize a mutually advantageous trading opportunity in a particular good, e.g. in electronic markets. Another type of market institution would be an

The role of market institutions in making new contacts
= Market Institution A
= Market Institution B
Graph 7

education certificate organization that monitors everyone's educational claims and gives out credible signals to everyone about educational claims. The essential characteristic of a market institution is that it is a) universal in that it aims to cover all units, b) specific in that it deals 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 institutions 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. They also explain why market institutions crowd out informal, social capital networks over time as they gradually take over the economic role of informal networks.

The next sections discuss the role of social capital in production (section 4), innovation (section 5), and economic development (section 6). Political economy considerations are addressed in section 7 and stylised growth scenarios are sketched in section 8. Section 9 concludes.

4.   Social Capital and Economic Performance: A Search Perspective

Most authors writing on social capital, however they interpret it, seem to agree that social capital is beneficial for incomes, production, and innovation. Some examples:

- Temple (1998) argues that social capital differences explain much of the variation of growth performance among African economies.

- Maluccio et al. (2000), using a household panel data set in South Africa, find that social capital had a positive effect on per capita expenditure in 1998.

- Carter and Maluccio (2003) report that South African "[h]ouseholds in communities with more social capital … seem better able to weather shocks".

- Grooteart et al (2002) investigate empirically the importance of social capital, in the form of local associations and networks, for the welfare of rural households in Burkina Faso, drawing on a database combining standard information on household welfare with multidimensional measures of social capital. They find that higher levels of social capital are associated with higher household per capita expenditures and better access to credit.

- 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.

- Wilson (2000) writes that "[r]ecent empirical work [in agribusiness] demonstrates that social capital … considerations are prevalent and economically significant, especially in business".

- Aquilera (2002), using the 2000 Social Capital Benchmark Survey, finds that "'friendship networks are generally positively related with increased labour force participation". Many more such findings exist (see the references in Putnam, 2000).

Why is it that social capital tends to bring material benefit[3]? This paper's answer, in a nutshell, is that one needs to unpack social capital into an individual component that is directly productive and social networks (also termed Communal Social Capital) that are only indirectly productive. The former, i.e. economically beneficial linkages, is termed 'relational capital' (RC)[4]. Thus RC is the 'individually productive' aspect of social capital. Social networks can be relatively easily converted into search clubs, in which members can launch searches for partners with particular economic characteristics. They are hence useful in producing RC. Leaving the question of the productive use of RC till later Sections, consider first the link between social networks and the creation of economic linkages because the dominant interpretation of social capital has been as social networks.

Social networks consist of relations in civil society. Such networks are like clubs. By having restricted and screened entry, they reduce heterogeneity within the club, compared to the population at large. 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. Hence social capital networks may act as a search friction-reducing club, as Moen (1997) discusses with respect to the labour market.

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. 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 and reduces transaction costs. These costs include the costs of explicit contracting and activation of pre-commitment devices. Both can be understood as labour costs of making RC.

For any individual economic unit, being a member of a club brings individual advantages. This is why having social networks is *individually* beneficial. 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 labour cost for searching

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[3] Note that we do not ask why social capital tends to increase well-being, as is also frequently found (Killerby and Wallis, 2002). That there may be such a 'warm-glow' effect of social linkages, we focus exclusively on its material benefits.
[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. It is used in Bezemer et al. (2003) to address the post-socialist transition experience.

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. Social networks reduce search costs and can thus solve these problems.

Social networks and individual economic linkages (RC) often 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 that is 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 networks makes it less costly to search for RC linkages. Whilst social networks are a separate entity from RC whose main role is to aid the production of RC, some overlap is envisaged.

5.   Relational Capital, Innovation, and Growth

Community Social Capital thus helps to create RC linkages. But how exactly is RC economically beneficial? In this paper, RC affects output in two ways. It is an input in sold output, and as such indispensable for profitably producing; and the replacement of old contacts by new ones is a prerequisite for technical progress. Consider each of these functions in turn.

RC is an input in the *sold* output of a representative unit. This means the sale of outputs and the purchase of inputs are part of the productive activity of a unit, which follows the New Institutional literature (Williamson and Masten, 1999). 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 specialisation which brings with it the 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 facts[5].

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; these authors use

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[5]The relevance of these arguments is particularly strong 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.

different concepts though because they do not unpack social capital like we do). Within a conventional production function approach[6], physical production depends on inputs of conventional capital and net total labour; but *sold* capital depends on RC and the other capitals. Total labour is allocated to either the production process, or to the creation of RC, which is white-collar labour. Other than this division of labour, no special assumptions about the production function is made, 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.

To summarize our considerations so far, we assume that the technology of a unit is given by the production function

$$y = f((L - L^{rc}), K, RC, A),$$

where y denotes the sold output of a unit, A denotes the quality of the technology used, L^{rc} is the amount of labour that is used to create and replace RC and $L-L^{rc}$ is the remaining productive labour. That is, RC is a separate input in sold output. Labour has to be used for production as well as for the managerial function of RC creation and replacement.[7]

It is important to briefly point out two key assumptions behind our assumption that it takes labour 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. 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 modelled 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. RC creation is therefore the white-collar complement of physical production; it is 'what managers do', both within and between organisations.

A second role of RC comes in via the argument that innovations need the destruction and replacement of some relations. Consider that 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.

The destruction of old contacts and old ways of organizations in order to find better technologies is named 'creative destruction' - in line with Schumpeter's view that invention and innovation are

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[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.

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. Also this function of RC can be understood in terms of a production function approach, where the technology parameter 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 from the point of view of developing countries; 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 boosts 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'. Lall (1999) 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. Grant (2001) presents evidence from primary and secondary data on reallocation of enterprise contacts in Ghana as a means to achieve innovation. 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 new 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 the right contacts is vital to innovation.

Consider interactions between units. The main point is that 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 contacts is replaced by one new contact), the former business partner's RC diminishes by one. If this business partner depended entirely on this contacts 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

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[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.

RC replacement. Thus, RC replacement may be individually rational but collectively harmful, ceteris paribus.

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. In the extreme, with pair wise production, the net loss of contacts for every contact replaced is only equal to 1. The example below graphically illustrates this simplest situation. Units can create additional linkages (allowing them to do more of the same), or replace linkages (allowing them to innovate). With RC addition, no unit loses contacts; with RC replacement, units whose partners make new links are left out of the new network, and the net number of links in this four-unit economy decreases.

Example: how destruction and creation of contacts works on the micro level

— = old contact
- - - = destroyed contact
— = new contact
• = firm or employee within firms
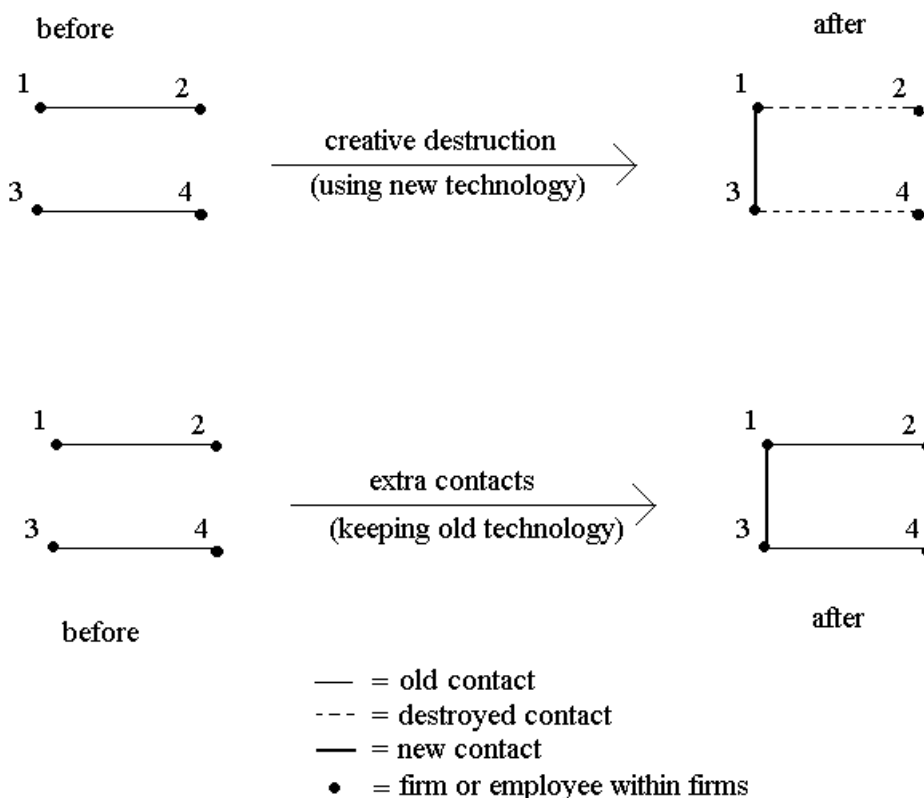
Within this framework, consider two factors that are pivotal in innovation and growth. One is the conversion rate of (white collar) labour into relations. In terms of the search literature, this can be interpreted as the arrival rate of contacts. The circumstances that affect contact and destruction rates in search theory (as presented in Ashenfelter and Layard, 2000) would seem to carry over to the conversion rate of (white collar) labour into relations: greater geographic or cultural distances and more

complex and specific production all decrease it. The next sections argues that an economy wide increase in this conversion rate is key to economic growth, and that market institutions greatly increase this conversion rate.

Another 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 7 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.

6. The Fundamental Transformation

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 labour 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 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 informal networks and trust need to be replaced with more efficient (typically formally defined) market institutions. In the absence of well-developed market institutions, informal networks and trust may reduce search and monitoring costs (compare to the counterfactual of no search devices at al); 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.

The main point here is that formal market institutions on the one hand and Community Social Capital on the other hand are (at least partly) substitutable. 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) analysing 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 were possible and informal institutions were necessary[9]. 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. How do market institutions do it?

Units are heterogeneous (e.g. in their credit-worthiness or reliability). This creates free-riding behaviour 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, drive 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 for example include banks, which monitor creditors and lenders. Public institutions include courts and Chambers of Commerce, which screen new members. Some systems are provided either publicly or privately like credentialist systems (e.g. education certification), food standard agencies, and the like.

Both public and private market institution are like search clubs - just as social capital networks are. However, search and monitoring via personalized, informal institutions such as networks of civil society and kinship is less efficient than via formal market institutions. The inefficiency of informal networks is the very reason that their replacement helps market development to take off. There are four reasons for their inferior search efficiency.

The first is that formal institutions exhibit far larger increasing returns to scale in monitoring and sorting. An informal lender can, through her contacts, know about and assess perhaps twenty

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[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 is destroyed, whilst other aspects actually increase.

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.

A second reason is that informal institutions, such as kinship networks, require more socializing and are thus less time-efficient.

Third, the economic attributes of contacts are intertwined with other social attributes, such as kinship or tribe, which affect well-being. This implies that such factors are taken into account in decisions to break or form contacts, which may often lead to economically sub-optimal outcomes. As a simple example, a self-employed entrepreneur may invest from pooled financial resources within the extended family against compensation such as employment of family members, interest, or in-kind produce sharing. She may find cheaper credit at a bank, but will have to consider how to compensate family members, especially if they have no alternative use for their resources. In contrast, an entrepreneur switching from one commercial bank to another only needs to consider the loan attributes (interest rates, term structure, and collateral). Where the economy is personalized, the personal relations become to some extent economized. As markets develop, RC shifts away from the personal, social-capital sphere. It is replaced by RC embodied in formal market institutions.

The fourth reason why RC replacement via social capital networks occurs inefficiently is that they are often politicised. Contact destructions and creation may be dependent on, or influenced by, political actors. This issue requires a fuller treatment, and is the subject of the next section.

These are thus the arguments for the view that economic development and growth start when impersonal market institutions are beginning to replace informal networks. One cautionary remark is in order. The simplistic conclusion form 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 of course negates the role of 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 intermediating contact formation, 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 informal institutions and social networks. They push a pre-capitalist economy to the point where it becomes profitable to introduce capitalist institutions. Developed social networks may thus, by their effect on the density of RC, be the

prerequisite to market institution development [10]. Ironically perhaps, it seems well possible that one needs dense initial informal social networks to hit upon a growth path that will eventually replace those very informal networks by Market Institutions.

7.   Markets, Meddlers, Mediators

Social and political processes are seen by many as central to successful 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 labour 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 second of all though depends on the cost of replacing the old contact after having already found a potential new contact, which is expounded upon below.

There are several ways in which constraints arise on RC replacement. 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 power[11]. Politicians and bureaucrats may 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. Dictators or crony capitalists are prone to do so, since they are attempting to centre political power on themselves and their elite. It is difficult to attain this while allowing substantial economic power to units that are independent from

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[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' … [is] almost certainly misconceived." 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.

this elite. This is why the dictator will attempt to impose links that bind units to the political centre. Breaking such links will be punished.

In the 'meddle-free' situation, 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 socialist planner, a dictator, an elite, or a bureaucracy, the higher break up costs will be, 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. And destroying an old contact is a very visible activity with a very visible loser who can alert politicians to an opportunity for expropriation. Adding contacts whilst not destroying old ones is much less visible. Uncertainty over property rights thus discourages investment in RC generally, and discourages replacing old contacts in particular.

Technological backwardness and impeded growth result. This has indeed been noted in the literature on command economies: the technological lag is often cited as a major reason for the collapse of centrally planned systems (e.g. Gros and Steinherr, 1995; Aslund, 2002). Also many developing countries have dictators and crony economic elites, and are technologically backward. These two general features are not unrelated.

Centralization makes it worthwhile for units to lobby the political centre not to allow creative destruction by other units. Such lobbying 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 decision making invites 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 and the benchmark market economy. 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. Faccio et al (2001) compare this to dividends in American corporations, which are typically held in widespread ownership, and find they are appreciably lower.

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 power externalities of the choices of individual units, changes in constituent part of the system may lead to endogenous decline or growth, or to non-linearities. Some possible outcomes are traced in the next section.

8.   Development Scenarios

In many models of development, it is difficult to capture the notion of systemic change. The two factors that give a handle on systemic change are: the rate at which labour 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. A an idealised capitalist system, there would still be a non-negligible positive rate at which labour 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 will be positive, and possibly prohibitive. In order to organize the discussion, three scenarios are sketched based on different assumptions about these two key factors. One of these is a benchmark scenario; the others are stylised reflections of the real-world experiences of enterprises in developing and transition countries. Here, a qualitative description of these scenarios is given; in a companion paper, these are quantitatively modelled and simulated (Frijters et al, 2003).

In all scenarios, the economy starts in a situation with high costs for *RC* creation and almost impossible *RC* replacement. That is, the initial state is a "hypothetical" highly centralized economy that reached a steady state. The scenarios differ with respect to the assumptions on how reforms affect the developments of key parameters: the labour cost of making new contacts and the additional costs of replacing contacts.

Scenario A: Gradual Market Development. The simplest portrayal of economic development is one where both political barriers and contact rates move slowly towards the benchmark state of perfect markets, with low labour cost of RC creation and low political barriers to RC replacement. The resulting growth path would be a familiar log-shaped one over time, where technology approaches the technological frontier initially fast, slowing down later. This, perhaps, is the 'canonical' development path, the one that is often seen as the most natural development path. Historical and contemporary evidence suggest that it is, however, rare if existent at all. Technological progress and political changes often occur in fits and starts. Enduring growth is elusive for many countries, which experience booms

and downturns. This is the reason to consider two other scenarios, which are probably of greater relevance to contemporary growth challenges.
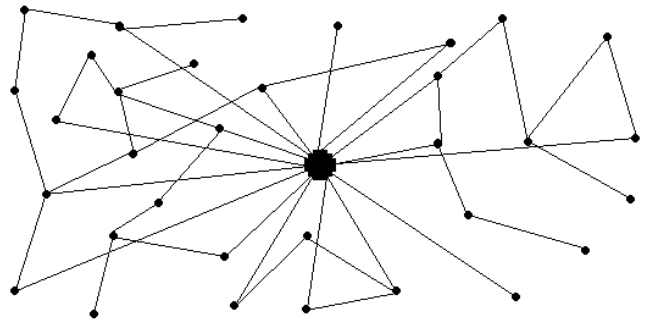
Scenario B: 'transition', and other sudden and comprehensive market liberalizations. A 'big-bang' systemic change can be represented as a one-off unanticipated decrease in the cost (punishment) a unit incurs when it breaks contacts with another unit. Overnight all political control on RC replacement 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; see EBRD, 2003 for figures). More generally, Greenaway et al (2002) survey the experience of 25 developing countries, which implemented 'deep' market liberalization programs. 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. In most cases this was an initial surprise to analysts, since the 'freeing up of market forces' was expected to lead to immediate output gains.

Using the framework so far developed, it is straightforward to account for this experience, with no special additional assumptions[12]. 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 was showed, this is individually rational but can be collectively harmful in the short term, especially in economies that are highly centralized, and were 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 labour 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, a transition can be depicted as below:
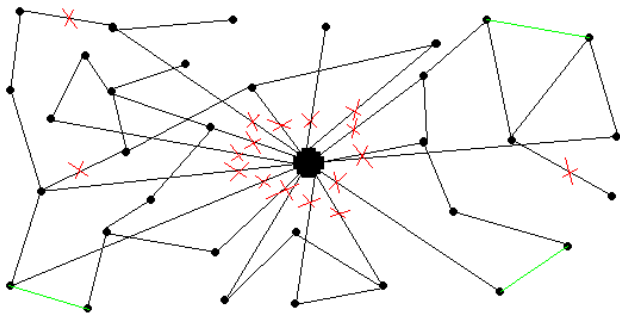
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[12] Concretely, it is assumed that firms maximize discounted-profits and have rational expectations after the shock.

Here, 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 centre.

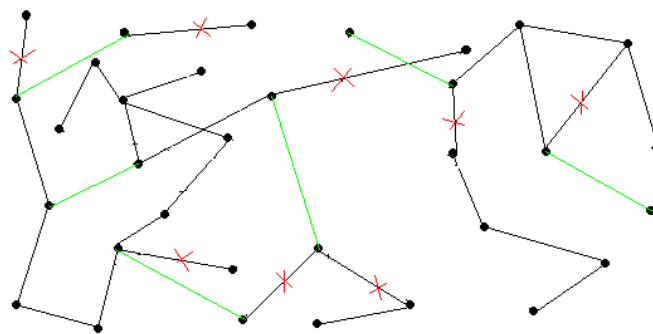The economy during a cold-turkey market liberalisation: before

Here, the centre breaks all ties overnight or it simply disappears, or loses its power to enforce contacts, leading to large-scale destruction of contacts. Simultaneously, there is some new growth in contacts depicted as green lines. This is however a period of large initial economic downturn.
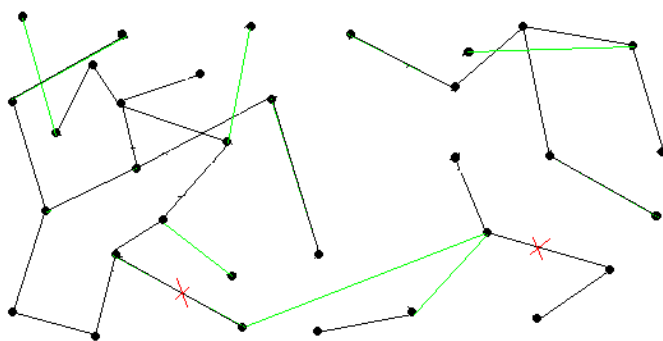
The economy during a cold-turkey market liberalisation:big bang

destruction happening because of the activities of individual units breaking from old partners to form new relations. There is some true contact growth happening, but not enough compensate.

Left on their own, there is still more

The economy during a cold-turkey market liberalisation: ongoing

away

to

Finally, the economy stabilizes and there is more growth than destruction of contacts. In the meantime, technology has improved due to the large-scale creative destruction and economic growth appears.

The economy during a cold-turkey market liberalisation:ongoing2

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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 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. 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.

Scenario C: Cyclical Development. While scenario B approached reality by focusing on the one-off nature of some recent 'emerging market' experiences, here it is approached by concentrating on the interconnection of economics and politics, which many see as at the heart of the growth and development challenge in the traditional developing countries. The key factors, i.e. the rate at which labour is converted into RC, and the cost a unit incurs when it breaks contacts with another unit, are likely to be interdependent. To see this, note that in any economy, the RC linkages constitute networks. As was explained above, larger networks decrease the costs of creating new linkages for any individual within the network. Thus growth in the overall network increases the RC creation rate, which spurs further growth in the network. This may create a virtuous circle until a maximum RC creation rate is reached. Conversely, very small networks imply high search and RC creation costs, discouraging network growth. Thus, there are endogenous accelerations in both RC build-up and decline. Intuitively, it is clear that this will lead to cyclical behaviour in RC stocks, and, by implication, in output levels[13].

There is a second interdependence that also supports the idea that cyclical growth and decline is likely. This is linked explicitly to the political economy of RC creation. More RC is likely to lead to reduced political barriers to creative destruction. The reason is that contacts can be used as channels of information and manipulation, and are therefore a means to influence politics (Guy, 2000). This power can be used to decrease the costs of creative destruction by lobbying for the development of market institutions and by controlling politicians (for example via the press). This argument follows the literature on the importance of civil society for growth. Growing entrepreneurial networks transform the nature of the polity to decrease political interference. This appears to be occurring in present-day Cuba, Vietnam, and China.

Taking these factors into account leads to the prediction that a cyclical growth path is likely to emerge. The economy would only be able to break out of this at the point where the RC network becomes so large that the political feedback of changes in RC becomes of marginal importance. This

mechanism is a tentative explanation of the persistent political-economic difficulties of many developing countries to achieve sustained growth. Political cycles and the frequent un-doing of reforms after elections is, according to the historical analysis of Block (2002), a frequent phenomenon in African countries.

9.   Summary and Conclusions

This paper provided a framework for the economic role of social capital in transition and development. As its centrepiece, the notion of relational capital was introduced. This captures the importance of contacts to the generation of incomes from entrepreneurship and employment. 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 the state to hinder it. Growth vitally depends on acceleration in creative destruction, where new contacts can be created through market institutions rather than via informal networks.

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 labuor 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. Endogenous feedbacks between the size of the RC network and the speed of RC creation suggest that growth is likely to be cyclical rather than continuously positive.

This paper thus adopted a nuanced view on the role of social capital in development. Economic growth is all about increasing and improving the stock of productive contacts, which can be seen as an aspect of social capital. Community Social Capital aids firm and households in an underdeveloped economy to create RC, 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,

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[13] Frijters et al. (2003) provides a specified model where simulations show cyclical behavior during transition.

1997). In a sense, one needs social networks to have initial growth in relational capital that leads to the profitability of market institutions that crowds out these same social networks.

This paper's approach, and the breadth of phenomena it aims to cover, may strike some readers as ambitious. For a correct appreciation it is important to also emphasize its limitations. This paper concentrated on the entrepreneurial and productive side of the economy. It does not capture issues relating to trade and monetary polices, and important aspects of economic development such as health, income inequality, and migration. There is much left to be done.

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