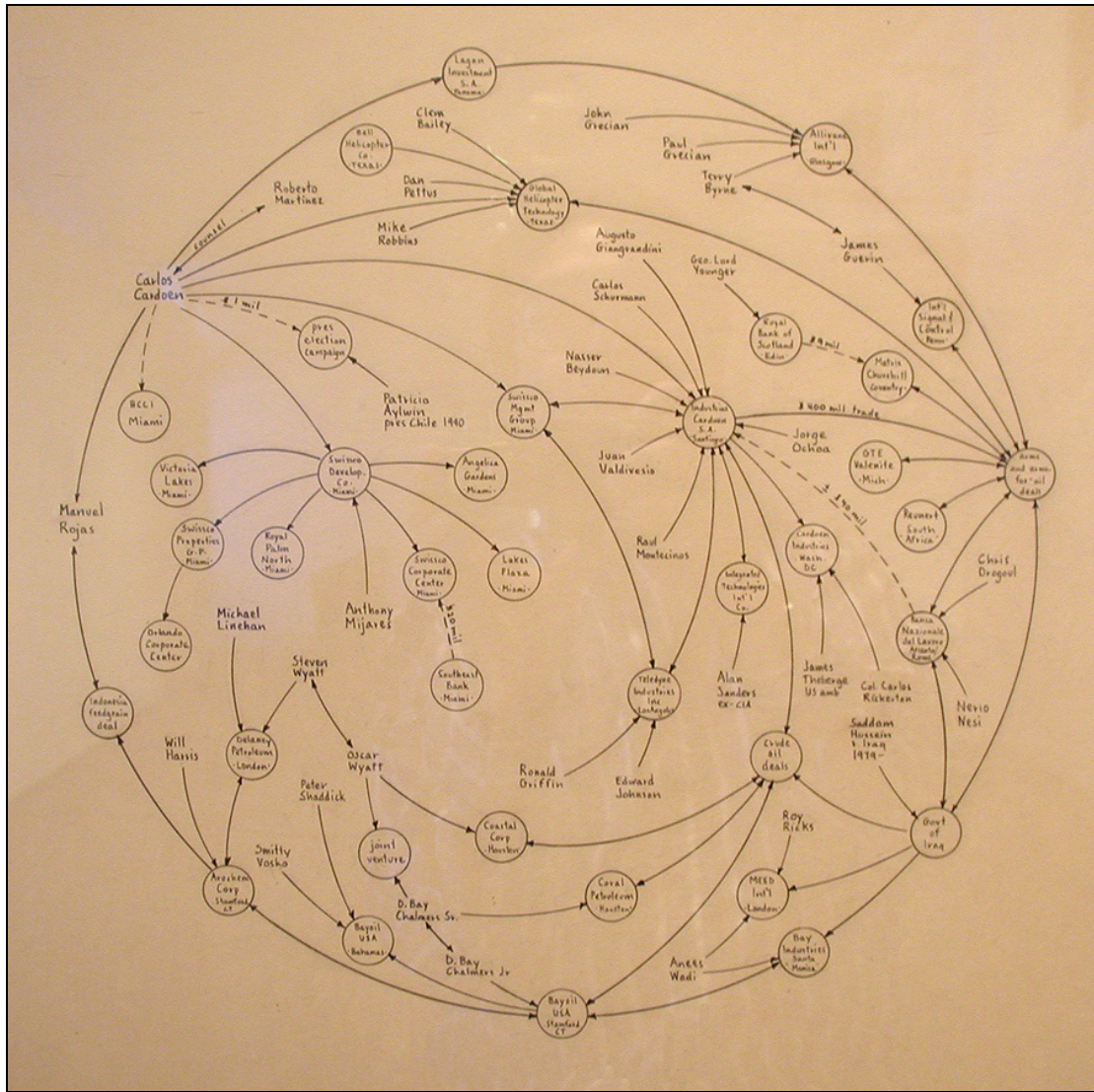


# A spatial-economic approach to social capital

## Theory and measurement



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Theory and measurement

Picture on the cover: Network art by Mark Lombardi

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## Preface

This thesis represents the end of my study of Economic Geography at the Faculty of Spatial Sciences at the University of Groningen. The realization of this thesis started in the summer of 2005 when I left for a 3 month period to the University of Reading in England. Together with Professor Philip McCann, who guided me through the process of starting up this research, the foundation of this thesis was laid. At this moment, a good year later, I have finally completed my thesis on social capital.

The core idea of social capital can be summed up in two words: relationships matter. During the process of writing this thesis I have experienced the importance of relationships myself. Many friends, family members and my supervisors have helped me develop my ideas about social capital. Much of this learning has been rewarding in itself. Without their input, the endless discussions and support, the writing of this thesis would not have been as fulfilling as it has been. In particular I would like to thank the following people:

First of all, I would like to thank Professor Philip McCann of the University of Reading Business School for supervising my research during my stay in Reading. His advice, reading suggestions and critical remarks, made the concept of social capital more comprehensible and provided me with a clear guide line for the research. Back in the Netherlands, I was supervised by Mr. Paul van Steen of the University of Groningen. I would like to thank him for his critical comments, good advice, his patience and for always finding the time to read my concept chapters in his busy schedule. I am also thankful to Mr. Hans Versteeg of the NIWI- Steinmetz Archives for providing me with the much needed data.

Groningen, August 2006

Petra de Jong

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## Summary

In recent years, both economists and geographers have been looking at so-called soft factors in order to explain the differences in economic performance of countries. Trust and honesty are considered to be examples of such soft factors. The general idea behind this is that a high level of mutual trust and (financial) honesty lowers transaction costs and therefore increases economic growth. In this thesis the link between factors like trust and honesty and economic development are explored from the broader perspective of social capital.

Recent interdisciplinary work suggests that “social capital” plays an important role in explaining both the efficiency of political institutions and the economic performances of contemporary society. The theory of social capital claims that societies are endowed with social as well as physical and human capital, and that social capital is a predictor of long term economic performance. The core idea of social capital can be summed up in two words: relationships matter.

The concept of social capital has been widely discussed across the social sciences in recent years. Problematic is that each science presented its own perspective on the concept of social capital. This divergence in perspectives has created theoretical confusion. This has hindered the emergence of a unified theory. Confusion over the concept social capital is further reflected in the variety of methodologies used to measure it. Therefore, the aim of this thesis is to come to a useful application of the concept social capital in reference to (regional) economic development. Besides coming to a useful theoretical application is it also necessary to develop a measurement methodology which is focused on the spatial-economic application of social capital.

In order to do so the thesis starts off with a general explanation of the theory of social capital. Here the writings of Pierre Bourdieu, James Coleman and Robert D. Putnam are further investigated. The writings of these three “relatively distinct tributaries” in the literature on social capital (Field, 2003), all share some commonalities of understanding about the nature of social capital. They all consider that social capital consists of personal connections and interpersonal interaction, together with the shared sets of values that are associated with these contacts. Within this broad understanding, however, each author differs in his emphasis. In brief, Bourdieu shares with Marxism a concern for questions of unequal access to resources and the maintenance of power; Coleman focuses on the idea of individuals acting rationally in pursuit of their own interests; Putnam has inherited and developed the idea of association and civic activity as a basis of social integration and well-being. On the topic of social capital, the view of Robert D. Putnam has become the dominant voice. The remainder of this thesis is therefore focused on the definitions of social capital presented by this author. That is, social capital as:

*“features of social organisation, such as trust, norms and networks, that can improve the efficiency of society by facilitating coordinated actions”*

*“...connections among individuals, social networks and the norms of reciprocity and trustworthiness that arise from them”*

According to these definitions social capital consists of three main elements. The first element is the network element, which is considered to be the structural part of social capital. The value of social

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capital namely lies in its power to improve social organisation by increasing society's capabilities to overcome social coordination problems. The other two elements, norms and trust(worthiness), are the necessary ingredients to make this happen and can be considered to be the moral part of social capital.

The elements trust and networks are considered to be the two key indicators of social capital in reference to economic development. The thesis therefore continues with an investigation of the possible relations between trust, (economic) cooperation and economic performance.

Based on the social capital literature it is possible to formulate several assumptions of the impact of trust on economic performance. Firstly, economic activities that require some actors to rely on the future actions of others are accomplished at lower cost in higher-trust environments. In other words: individuals in higher-trust societies spend less money to protect themselves from being exploited in economic transactions. Therefore written contracts are less likely to be needed and they don't have to specify every possible contingency. Secondly there is the assumption that low trust can discourage innovation. The idea behind this assumption is that when entrepreneurs have to devote more time to monitoring possible malpractice by their partners, employees and suppliers, they have less time to devote to innovation in new products or processes. Thirdly, high-trust societies are less dependent on formal institutions to enforce agreements. There are supposedly two reasons for this. Informal credit markets dependent on strong interpersonal trust can facilitate investment where there is no well-developed formal system of financial intermediation. Besides this, interpersonal trust can also provide an imperfect substitute for government-backed property rights or contract enforcement where governments are unable or unwilling to provide them. Fourthly, government officials in higher trust societies may be perceived as more trustworthy, and their policy pronouncements as thus being more credible. In such a situation trust triggers greater investment and other economic activity. For example in these societies people adopt more appropriate horizons in making investment decisions, and choose production technologies that are optimal over the long, rather than short, run. Further, trusting societies are more likely to have higher returns to accumulation of human capital. The assumption behind this is that where trust improves access to credit for the poor, enrolment in secondary education may be higher. Finally, in low-trust societies hiring (of staff) decisions will be influenced more by trustworthy personal attributes of applicants (e.g. blood ties) and less by educational credentials, than in high trust societies. This reduces the returns to acquisition of educational credentials in low-trust societies.

Regarding the function of cooperation and its link to economic growth, the theory is less clear than with respect to trust. Nevertheless it is possible to formulate two functions of associational activity on welfare. The first states that network relations improve the efficiency of society by facilitating coordinated actions. The second function is closely related to the theory of networks and the advantages of being embedded in networks. There are two theoretical approaches for this: the weak-tie approach, which argues that a large network of arm's-length ties is most advantageous, and the strong-tie approach which claims that a closed tightly knit network of embedded ties is most advantageous.

The question remains whether these speculations are in compliance with what we actually know about social capital and economic performance. A growing body of research documents significant correlations between social capital variables and important economic outcomes. Several of them are discussed more thoroughly in (chapter three of) this thesis. In general these researches suggest that investing in social capital is a potentially useful component of better economic development theory and policy. Nonetheless it appears highly problematic to create a conceptual policy framework on social capital. According to Woolcock there are three reasons for this. Firstly, the nature and extent of social relations vary within and among different institutional sectors. Woolcock secondly claims that



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the tasks performed by these relationships necessarily change as economic exchange becomes more sophisticated. Thirdly, both “too little” and “too much” social capital at any given institutional level can impede economic performance.

An implication of these problems is that an economic development policy based on the facilitation of social capital must not only be a resource that helps to overcome *static* dilemmas of collective action; but it must also be called upon in the course of resolving *dynamic* organizational dilemmas. To accomplish this, policies must achieve a complex dynamic between “top-down” and “bottom-up” incentives to the formation of social capital. Woolcock therefore offers a framework within which top-down and bottom-up social capital based programmes can be designed and evaluated. An explanation of this framework can also be found in this thesis.

So far this discussion on social capital has been primarily non-spatial. The remainder of the thesis will therefore try to explain the possible link between geography, economic development and factors of social capital, especially trust. What is the link to social capital? Social science has recently recognized that our daily interactions are embedded. For example, the spillover of knowledge and information between different actors is promoted by the embeddedness in networks. Proximity and the shared history, culture and frequent face-to-face interchanges that it brings about, facilitate these networks.

In order for interacting firms to attain the social capital of the geographically embedded communities (networks), they usually need to co-locate within the boundaries of this community. Firms located near to each other have more face-to-face contacts and can easily build up trust, which leads to more personal and thus embedded relationships between firms. Co-location is also thought to enhance flows of technical and market information, contributing to both innovation, and the diffusion of skills and competencies.

All theoretical speculations can be summed up in the following hypothesis:

*“Spatial proximity facilitates face-to-face contact, which fosters trust and this effects economic growth in a positive way”*

But does this mean that all proximity is related to trust? The answer to this question is “No”. After examining different types of industrial clusters, it appears that only the social network coincides with the formulated hypothesis. This model of clustering argues that mutual trust relations between key decision-making agents in different organisations are important, in the sense that these trust-based relations are absent of opportunistic behaviour. Spatial proximity will tend to foster such trust-relations and is therefore considered a necessity in this type of clustering. Industries associated with social networks, are industries which rely on informal information exchanges and technology spillovers. Besides this it appears that small firms are most likely to share knowledge, since they are the type of firms gaining the most from knowledge inflows and they also have relatively little to lose from knowledge outflows.

To find out whether these theoretical speculations are in compliance with reality, they are put to the test by using the chi-square testing technique. It turns out that the Putnam story doesn’t hold up very strong. There is no empirical indication that the level of trust in a region is related to the level of economic growth. It is also hard to find a clear relation between network activity and economic growth. Economic growth is significantly related to positive “Putnam” and negative “Olson” networks at the same time. When the relation between associational activity and trust is examined, it turns out that Olson groups are even more significantly related to trust than the Putnam groups are.

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This corroborates the ideas about the Olsonian perverse effects of membership in Olson types of organisations.

The main contribution of this research comes from the consideration of introducing spatial variables into the theoretical work on the underlying mechanisms that create social capital. So far this has not proven to be very successful, and is in need of further research. Based on the data of the World Values Survey it is possible to test whether clusters are related to social capital. The results of the chi-square test show that the cluster variable is significant related to trust and to the memberships of Putnam groups. With the existing database it is also possible to test whether firm size is related to social capital. It turns out that there is no dependency between the variable "firm size" and any of the social capital variables. This does not necessarily prove that social networks are not related to social capital. It could also indicate that firm size is simply not a good indicator of social networks. Other, perhaps better, indicators of social networks are loyalty, history and the level of embeddedness, but these are impossible to measure with the existing database and would require a secondary research.

In general it can be concluded that research on social capital unveils many problems in the areas of definition, causality, effects and measurement of social capital. This suggests that the concept of social capital is still in the earliest stages of serious empirical research, and needs much more work before the concept has achieved any kind of theoretical maturity.

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# Chapter 1: Introduction

In recent years, both economists and geographers have been looking at so-called soft factors in order to explain the economic performance of countries (Beugelsdijk, 2002). Examples of soft factors are factors like trust and honesty. It has been argued that a high level of mutual trust and financial honesty in a given country lowers transactions costs and therefore increases economic growth (Fetchenbauer and Van der Veght, 2001). In this thesis the link between factors like trust and honesty and economic development are explored from the broader perspective of social capital.

## 1.1 Social capital

Recent interdisciplinary work suggests that “social capital” plays an important role in explaining both the efficiency of political institutions and the economic performances of contemporary society (Whiteley, 2000). The theory of social capital claims that societies are endowed with social as well as physical and human capital, and that social capital is a predictor of long term economic performance (Fetchenbauer and Van der Veght, 2001). The core idea of social capital can be summed up in two words: relationships matter (Field, 2003).

The concept of social capital has been widely discussed across the social sciences in recent years. While the debate is probably most developed in sociology, the concept has been widely discussed by economists and political scientists and has attracted attention among some historians, educationalists and feminists as well as specialists in social policy and urban policy (Field, 2003). Its scope for policy purposes currently encompasses economic development, health promotion, technological development and business innovation, poverty reduction, social inclusion and crime reduction (Field, 2003).

Each science presented its own perspective on the concept social capital. This divergence in perspectives has created some theoretical confusion (Lin, 2001). The usage of the concept social capital has several distinct variants, and this pluralism, along with the widespread and indistinct usage in the popular media, has hindered the emergence of a unified theory (McNaughton, 2000). Confusion over the concept social capital is further reflected in the variety of methodologies used to measure it (Zhao, 2002). In this thesis use will be made of the definition of social capital formulated by Robert D. Putnam. He defines social capital as:

*“...connections among individuals, social networks and the norms of reciprocity and trustworthiness that arise from them” (Putnam, 2000)*

## 1.2 Aim of the thesis

The purpose of the thesis is two-fold. The first aim of this thesis is to come to a useful application of the concept social capital in reference to (regional) economic development. The thesis will start off with a general explanation of the key ideas on social capital and will be slowly narrowed down to the core elements of the theory in reference to subsequently economic development and (economic)

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geography. Based on these theoretical speculations it is possible to formulate the main research hypothesis:

*“Spatial proximity facilitates face-to-face contact, which fosters trust and this effects economic growth in a positive way”*

This hypothesis can be explained in the following way: firms located near to each other have more face-to-face contacts and can easily build up trust, which leads to more personal and thus embedded relationships between firms (Boschma et al. 2002). Such trust-based relations create several advantages which have a positive impact on economic performance.

Besides coming to a useful theoretical application is it also necessary to develop a measurement methodology which is focused on the spatial-economic application of social capital. Based on the theory and a literature study on measurement methodologies already applied, an attempt will be made to develop a methodology to measure the relation between social capital on the one hand and economic development on the other. Based on these measurements it will be possible to conclude if the formulated research hypothesis is true or false.

Questions that will need further investigation during this research process are:

- What is social capital and why does it matter?
- Is there a link between social capital and economic development?
- Is there a link between social capital and (economic) geography?
- Is all proximity related to social capital (/ trust)?
- Is it possible to measure social capital, when it is applied to local economic development?
- Are these theoretical speculations in compliance with what is measured?

### **1.3 Structure of the thesis**

The thesis will continue with a general explanation of the theory of social capital. Special attention will be given to three theorists who are considered to be responsible for “giving life” to the concept of social capital: Pierre Bourdieu, James Coleman and Robert Putnam. Bourdieu, Coleman and Putnam have all come to the idea from different backgrounds and have therefore adopted very different views on the concept which will be discussed more thoroughly in chapter two. Putnam’s view on social capital has become the dominant voice in the literature on the topic; this thesis will therefore give a more elaborate overview of the different elements of social capital identified by this author. After this broad description of the theory of social capital it is necessary to investigate whether there is a possible link with economic development. Questions like “How does social capital affect economic performance?” will be posed in chapter three. In this chapter the relations between trust, (economic) cooperation and economic performance are explored from the broader perspective of social capital. This chapter will also give an overview on several already conducted studies on trust and related issues (mainly social capital) and their influence on economics. So far this discussion on social capital has been primarily non-spatial. The fourth chapter of this thesis will therefore try to explain the link between (economic) geography and social capital. In the last two decades there has been a widespread revival of both economic and public policy interest in the links between geography, trade and economic growth. There are several reasons for this renewed interest in the role which geography plays in determining economic growth, which will be discussed more thoroughly in this chapter.

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Chapter four will also provide the reader with additional information on spatial proximity. The aim of this chapter is to find out whether in fact all forms of clustering are related to trust-related issues.

After all these theoretical speculations it is time to put the theory of social capital to the test. In chapter five an attempt will be made to formulate a measurement methodology focused on the spatial-economic application of social capital. Since it is not attainable to fully conduct this measurement, it will be sufficed with conducting some core elements of the measurement for illustrational purposes. The outcomes of these illustrational measurements will also be analysed in this chapter. The main conclusions will be summed up in chapter 6.

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## Chapter 2: Social capital theory

### 2.1 Defining social capital

There are many different definitions on social capital and they vary widely in scope and meaning (Mosch, 2004). For example, Coleman (1988) broadly defines social capital as the “the ability of people to work together for common purposes in groups and organizations”. Another, rather narrow definition of social capital is given by Paldam and Svendsen (2000): “the density of trust existing in a group”. In general the theory of social capital can be summed up in two words: relationships matter (Field, 2003). The core idea of it is that social networks have value or as the American political scientist Robert D. Putnam (2000) puts it: just as a screwdriver (physical capital) or a college education (human capital) can increase productivity (both individual and collective), so too can social contacts affect the productivity of individuals and groups. Whereas physical capital refers to physical objects and human capital refers to properties of individuals, social capital refers to connections among individuals. Social capital is distinct from other forms of capital in that it is intangible, and not easily transferred. It is also distinguished by its ability to enhance the productivity of the other forms of capital (McNaughton, 2000). In other words: investment in social capital is a complement, rather than a substitute, for investments in physical or human capital (McNaughton, 2000).

According to Robert D. Putnam (2000) the term “social capital” itself has been independently invented at least six times over the twentieth century (Putnam, 2000). The first known use of the concept was by practical reformer of the Progressive Era L.J. Hanifan in 1916 (Putnam, 2000). Hanifan stressed the importance of community involvement for successful schools. To him, social capital referred to:

*“Those tangible substances (that) count for most in the daily lives of people: namely good will, fellowship, sympathy and social intercourse among the individuals and families who make up a unit”* (Putnam, 2000)

Hanifan’s conceptual invention attracted no notice from other social commentators and “disappeared” (Putnam, 2000). The same idea could therefore be “rediscovered” independently by other scholars (Putnam, 2000). Summed up, the idea was discovered in the 1950s by Canadian sociologists to characterize the club memberships of upstarting suburbanities, in the 1960s by urbanist Jane Jacobs to praise neighbourliness in the modern metropolis, in the 1970s by economist Glenn Loury to analyze the social legacy of slavery, and in the 1980s by French social theorist Pierre Bourdieu and by German Ekkehart Schlicht to underline the social and economic resources embodied in social networks (Putnam, 2000). Sociologist James S. Coleman put the term firmly and finally on the intellectual agenda in the late 1980s. Robert D. Putnam can plausibly claim much of the credit for popularising the term and bringing the idea to the attention of policy-makers and the wider public (Field, 2003)

The next paragraph of this chapter is concerned with the debate that has emerged since the 1980s, particularly with the writings of Pierre Bourdieu, James Coleman and Robert D. Putnam. These writers have been described as representing three “relatively distinct tributaries” in the literature on social capital (Field, 2003). There are important differences between them, which will be described in the following paragraph.

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## 2.2 Influential writings on social capital

The writings of Bourdieu, Coleman and Putnam all share some commonalities of understanding about the nature of social capital (McNaughton, 2000). They all consider that social capital consists of personal connections and interpersonal interaction, together with the shared sets of values that are associated with these contacts (Field, 2003). Within this broad understanding, however, each author differs in his emphasis (McNaughton, 2000). In brief, Bourdieu shares with Marxism a concern for questions of unequal access to resources and the maintenance of power; Coleman focuses on the idea of individuals acting rationally in pursuit of their own interests; Putnam has inherited and developed the idea of association and civic activity as a basis of social integration and well-being (Field, 2003).

### 2.2.1 Bourdieu

Pierre Bourdieu came slowly to the concept of social capital (Field, 2003). While Coleman and Putnam were working in a North American tradition of social and political thought, Bourdieu was very interested in the persistence of social class and other forms of inequality. According to Bourdieu groups were able to use cultural symbols as marks of distinction, both signalling and constituting their position in the social structure. By using the metaphor of “cultural capital” he gave force to this view, pointing to way that groups traded on the fact that some types of cultural taste enjoy more status than others (Field, 2003). For example: the ability to enjoy Bach was not just a sign of intrinsic superiority but coinage in the cultural currency over other groups. Besides this, Bourdieu emphasized that people’s ownership of cultural capital did not just mirror their resources of financial capital (Field, 2003). With this, he meant to say that cultural capital can, to some extent, operate independently of monetary holdings and can even compensate for a lack of money.

His early writings on social capital can be seen as part of a wider analysis of the diverse foundations of social order; with by far the greatest attention going to the concept of cultural capital. For example: in his study of taste and distinction among French middle class (which draws on a vast battery of empirical indicators of cultural capital), he gives only one indicator of social capital: membership of golf clubs (Field, 2003).

In a discussion first published in 1973 of the ways in which members of professional groups secure their position, Bourdieu initially defined social capital as:

*“capital of social relationships which will provide, if necessary, useful supports: a capital of honourability and respectability which is often indispensable if one desires to attract clients in socially important positions, and which may serve as currency, for instance in a political career”* (Bourdieu, 1977).

So far Bourdieu treated the concept of social capital as an adjunct to or even a dimension of cultural capital.

It is important to understand that Bourdieu’s main concern was and is the understanding of the social hierarchy. It has been claimed that in many ways, Bourdieu was engaging with a body of ideas that were deeply influenced by the Marxist sociology (Field, 2003). Bourdieu believed that economic capital is at the root of all other types of capital and he was interested in the ways that it could be combined with other forms of capital to create and reproduce inequality (Field, 2003). He believed that inequality was to be explained by the production and reproduction of capital. According to Bourdieu it is impossible to understand the social world without acknowledging the role of capital in all its

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forms, and not solely the one form recognised by the economic theory (e.g. economic capital). The role of social capital was used to describe the “principle of social assets” which was visible where:

*“different individuals obtain a very unequal return on a more or less equivalent capital (economic or cultural) according to the extent to which they are able to mobilise by proxy the capital of a group (family, old pupils of elite schools, select club, nobility etc.)” (Bourdieu, 1980)*

It can therefore be concluded that social capital functions to reproduce inequality, but does so partly independently of economic and cultural capital, from which it is nevertheless inseparable (Field, 2003).

The density and durability of ties between people were vital in the mind of Bourdieu (1980). He explains that social capital represented an aggregate of the actual or potential resources which are linked to the possession of a durable network (Bourdieu, 1980). He also acknowledged that the value of an individual’s ties depends on the number of connections they can mobilise and the volume of capital (cultural, social and economic) possessed by each connection (Bourdieu, 1980). To illustrate the interplay between connections and cultural or financial capital, Bourdieu uses the example of members of certain professions, such as lawyers or doctors. Bourdieu stresses that the professionals exploit their social capital, namely a capital of social connections, honourability and respectability, to win the confidence of a clientele in high society, or even to make career in politics (Bourdieu, 1984).

According to Field (2003) British social scientists have claimed that Bourdieu’s theory is the most theoretically coherent and persuasive sociological approach to the concept of social capital. But there have been some criticisms too. For example, Bourdieu views social capital as the exclusive property of elites, designed to secure their relative position (Field, 2003). In his view connections are thus cultivated by individuals in order to maintain their superiority; there is little space for collective actors (Field, 2003). There was also no place in his theory for the possibility that other, less privileged individuals and groups might also find benefit in their social ties (Field, 2003). It has also been said that he perhaps overemphasises the role of social capital based on kinship. Besides this an important critic is that his theory is ill-suited to deal with the more open and loose social relations of modern times (Field, 2003). As in many other areas, his fieldwork came largely from studies of the haute bourgeoisie during the 1960s and early 1970s.

### **2.2.2 Coleman**

The American sociologist James Coleman has had a much wider influence so far than Bourdieu. Coleman was able to show that social capital was not just limited to the powerful, but could also convey real benefits to poor and marginalised communities (Field, 2003). According to Coleman social capital represents a resource because it involves the expectation of reciprocity and goes beyond *any* given individual to involve wider networks whose relationships are governed by a high degree of trust and shared values. This is somewhat contradictory to Bourdieu’s views.

According to Field (2003) Coleman was seeking to develop an inter-disciplinary social science that could draw on both economics and sociology. Coleman was particularly influenced by the work of Gary Becker, who used the framework of rational choice theory to study the concept of human capital. Human capital then refers to the (educational) properties of individuals (Putnam, 2000). Coleman is seen as the main moving force behind the rise of rational choice theory in contemporary sociology (Field, 2003). The rational choice theory shares with classical economics a belief that all behaviour



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results from individuals pursuing their own interests. Within the framework of the rational choice theory Coleman sought to place his conception of social capital. Social interaction is seen as a form of exchange (Field, 2003). From the rational choice theory Coleman developed a broad view of society as a so-called aggregation of social systems on individual behaviour (Field, 2003)

The sociology of the rational choice theory assumes a highly individualistic model of human behaviour, with each person automatically doing what will serve their own interests, regardless of others. Coleman tried to use the concept of social capital in order to be able to explain how people manage to cooperate (Field, 2003). One example of how this works, much favoured by rational choice theorists, comes from the game theory (Field, 2003). A well known example of the game theory is the "prisoner's dilemma". In this mind game two individuals are held in separate cells, they are then told that the first to give confess will receive favourable treatment. The dilemma is whether to keep quiet (in the hope that no other evidence exists to prove guilt and receive no punishment at all if the second player behaves similarly) or to confess (and receive a reduced punishment). The rational choice theory predicts that the second option (to confess) will be chosen over the first (to keep silent); since each prisoner knows that the other is likely to confess when faced with the same choice (Field, 2003).

The rational choice theory predicts that each individual will follow their own best interests, even when cooperation might be better dividends in the long run. Yet, in the real world people still choose to cooperate. The main question therefore remains: why do humans choose to cooperate, even when their immediate interests seem to be best served by competition? Coleman argues that social capital worked in a way that was broadly comparable to the role of the "invisible hand" of the market in the classical economic theory. The principle of the "invisible hand" of the market is best explained by the following passage:

*"He (each individual) intends only his own gain, and he is in this, as in many other cases, led by an invisible hand to promote an end which was no part of his intention. Nor is it always the worse for the society that it was no part of it. By pursuing his own interest he frequently promotes that of the society more effectually than when he really intends to promote it" (Smith, 1776)*

In this passage, taken from Adam Smith's book "An Inquiry into the Nature and Causes of the Wealth of Nations" (1776) Smith sets out the mechanism by which he felt economic society operated (Joyce, 2001). Each individual strives to become wealthy "intending only his own gain" but to this end he must exchange what he owns or produces with others who sufficiently value what he has to offer; in this way, by division of labour and a free market, public interest is advanced (Joyce, 2001).

Using the economic distinction between public and private goods, Coleman explained how social capital helps understand the problem of collective action (Field, 2003). Unlike human and physical capital, which are normally regarded as private goods whose ownership and returns reside with individuals, he portrayed social capital as a public good that is created by and may benefit not just those whose efforts are required to realise it, but all who are part of a (social) structure (Coleman, 1988). It demands cooperation between individuals who are nevertheless pursuing their own interests (Field, 2003).

From a rational choice perspective however, this does not resolve the underlying problem of explaining why actors should choose to create social capital when they are supposed to be pursuing rationally their own, individual interests. Coleman solved this problem by simply abolishing it: social capital arises not because actors make a calculating choice to invest in it, but as a (unintended) "by-product" of their pursuit of self-interest (Field, 2003). To Coleman, this was the characteristic which

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distinguished social capital from human and physical capital. Human and physical capitals do arise as result of a deliberate and purposeful choice (Field, 2003).

Coleman believed that relations constitute capital resources that help establish obligations and expectations between actors, thereby building the trustworthiness of the social environment, opening channels for information and setting norms that endorse particular forms of behaviour while imposing sanctions on would-be free-riders (Coleman, 1988).

Coleman's perspective on social capital has strongly shaped the contemporary debate (Baron et al, 2000). Yet he has also been widely criticized. It has been said that for someone who sought to integrate economic and social theory on the basis of the rational choice theory, Coleman is surprisingly negative about individualism (Field, 2003). He tends to assume that it is bad, while not presenting any real arguments or evidence in support of this. He has also been accused by Portes (1998) of using a vague definition of social capital that subsequently opened the way for re-labelling a number of different and even contradictory processes as social capital. His analysis has been found to be weak and inconsistent (Field, 2003). Despite these reservations, Coleman's contribution has been both influential and significant (Baron et al. 2000).

### 2.2.3 Putnam

Since the publication of his study "Bowling Alone" in 2000, Robert Putnam has been regarded as the most widely recognised proponent of social capital. Whereas Bourdieu and Coleman are best known among relatively limited worlds of sociology and social theory, Putnam's contribution has leapt the boundaries of his professional field of political science, to a far wider public (Field, 2003).

Putnam's first contribution to the debate on social capital came towards the end of a study of regional government in Italy. This mayor study concerned the role of civic engagement in generating political stability and economic prosperity, based on two decades of empirical data collection (Field, 2003). His findings were published in the book "Making Democracy Work". The main research question was: Why do some democratic governments fail and others succeed? This book therefore tries to contribute to our understanding of the performance of these democratic institutions (Putnam, 1993). In order to find out what the conditions are for creating a strong, responsive and effective representative institution, a unique research was conducted in Italy for two decades (1970- 1990) (Putnam, 1993). In 1970 fifteen new regional governments were established in Italy. These governments had identical constitutional structures and mandates (Putnam, 1993). Another five "special" governments had been created too. These special governments had somewhat greater, constitutionally guaranteed powers. On paper these twenty are virtually identical and potentially powerful, but social, economic, political and cultural contexts in which the new institutions were created differed greatly (Putnam, 1993). The Northern regional governments as a group have been more successful than the southern regional governments. Putnam tries to explore whether the success of a democratic government depends on the degree of civic virtue/community of its surroundings. Putnam uses the concept of social capital to shed further light on these differences in civic engagement (Field, 2003). At the time, he defines social capital as:

*"features of social organisation, such as trust, norms and networks, that can improve the efficiency of society by facilitating coordinated actions"* (Putnam, 1993)

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More precisely, social capital contributes to collective action by increasing the potential costs to defectors; fostering robust norms of reciprocity; facilitating flows of information, including information on actors' reputations; embodying the successes of past attempts of collaboration and acting as a template for future cooperation (Putnam, 1993).

After publishing his study of Italian political institutions, Putnam switched his focus to the United States. He then published a series of papers claiming to demonstrate that there has been a sizeable decline of social capital since the 1940s, which explains the "ungovernability" of much of urban America (Field, 2003). By giving numerous examples of declining membership of Americans in different associations Putnam tries to explain that community organizations are not "revitalized" by new (younger) members (Putnam, 2000). This changing character of American society is explained with help of the concept of social capital. The core idea of social capital here is that social networks have value (Putnam, 2000). In his landmark book "Bowling Alone" he defined social capital as referring

*"to connections among individuals, social networks and the norms of reciprocity and trustworthiness that arise from them"* (Putnam, 2000)

According to Field (2003), this formulation marks a refinement of the earlier definition, in that it presented trust (together with reciprocity) as an essential element of the norms that arise from social networks. Putnam further explains that social capital has "two faces: a private and public face" (Putnam, 2000). The reason why individuals form connections is because this benefits their own interests (Putnam, 2000). However, social capital can also have "externalities" that affect the wider community. In this way not all the costs and benefits of social connections accrue to the one making the relationship (Putnam, 2000). This shows a strong resemblance with what Coleman argues.

The real core of Putnam's study of the United States lies in its meticulous assembly of empirical detail (Field, 2003). In his book "Bowling Alone" Putnam systematically analyses a range of statistical data on social trends over the second half of the twentieth century. He used different sources, mainly surveys like the General Social Survey. It is important to note that none of these sources had originally been compiled in order to answer the questions that Putnam was asking (Field, 2003). In other words: he made use of data, compiled by other people for quite different purposes. In spite of this, virtually all evidence pointed in the same direction: a decline in social capital since the 1960s (Putnam, 2000).

Putnam then tries find out what the possible causes of this long-term decline are. Ultimately he gives four "main suspects". First, busyness and the pressures associated with two-career families have reduced the time (and other resources) that women in particular can devote to community involvement (Putnam, 2000). However, further analysis proves that connectedness and engagement have diminished not only for working women, but almost equally for men and women, whether working or not. Therefore, Putnam (2000) concludes that pressures of time and money can only be contributory factors. Second, he notes that the residents of large metropolitan areas suffer from what he calls a "sprawl civic penalty", as they are required to spend increased amounts of time getting around, and their ties tend to be more fragmented (Putnam, 2000). However, like pressures of time and money, Putnam regards urban mobility and sprawl as a contributory factor, because civic engagement has also declined in small towns and rural areas (Field, 2003). The two main suspects are home-based electronic entertainments, above all television, and generational exchange (Field, 2003). These last two suspects will be discussed now more thoroughly. Putnam's data suggests that heavy television users have virtually all dropped out of civic life and spend little time with friends or even, increasingly family (Putnam, 2000). Age, though, is the only factor which proves an exception to the broad pattern of falling civic engagement (Putnam, 2000). Putnam, for example, finds that people born

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in the 1920s belong to nearly twice as many associations as their grandchildren in the 1960s, are twice as likely to vote and are almost three times as likely to read a newspaper (Putnam, 2000). You could say that the “unusually civic generation” of the 1920s is being replaced by other, less civic minded, generations (Putnam, 2000).

Putnam’s contribution has been considered monumental (Field, 2003), but it hasn’t been without critique as well. It has been said that Putnam’s indicators of engagement were largely “out of date” (Field, 2003). As noted before, Putnam uses datasets which have been originally compiled for other purposes, therefore people have said his evidence is ambiguous (Field, 2003). Another example of critique is that several other writers have noted that Putnam’s evidence of declining engagement in the United States has to be set aside contrasting evidence of vibrancy in Western Europe (Field, 2003). Because European societies closely resemble the United States in patterns of leisure and generational change, you might expect these societies to show similar declines of civic engagement (Field, 2003). So far it remains to be seen whether studies of social capital in countries Sweden or Britain are in fact more typical of Western trends than Putnam’s.

On the topic of social capital, Putnam’s view on it has become the dominant voice (Field, 2003). In order to focus more, in this thesis, we constrain ourselves to the two definitions given by Putnam (discussed above). That is social capital as:

*“features of social organisation, such as trust, norms and networks, that can improve the efficiency of society by facilitating coordinated actions” (Putnam, 1993)*

*“...connections among individuals, social networks and the norms of reciprocity and trustworthiness that arise from them” (Putnam, 2000)*

## **2.3 Elements of social capital**

According to the definitions given by Putnam, social capital consists out of three main elements. The first element is the network element, which forms the structural part of social capital (Mosch, 2004). This is explained in the following manner; the value of social capital lies in its power to improve social organisation by increasing society’s capabilities to overcome social coordination problems (Mosch, 2004). The other two elements, norms and trust(worthiness), are the necessary ingredients to make this happen and can be considered to be the moral part of social capital. These elements need further investigation.

### **2.3.1 Trust**

Social capital and trust are closely related (Mosch, 2004). Some authors consider trust as a part of social capital, while others consider trust as a direct consequence (or the dividend) of social capital. Just as social capital, there are many definitions of trust, which vary widely. First of all it is important to make a distinction between interpersonal trust and institutional trust. With regard to interpersonal trust, the economist Sobel (2002) uses a definition which is centred at the decision of the trustor:

*“Trust is the willingness to permit the decision of others to influence your welfare”*

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Political scientist Newton (2001), on the other hand, puts the emphasis on the actions of the trustee:

*“Trust is the actor’s belief that, at worst, others will not knowingly or willingly do him harm, and at best, they will act in their interest”*

Most of the definitions of trust given in the literature relate trust to the expectation of the future behaviour of others. In general interpersonal trust relations have three common aspects (Coleman, 1990). Firstly, the trustee has a choice to honour or abuse trust, after this trust has been placed by the trustor. Next, honoured trust leads to a benefit for the trustor, whereas abuse leads to a loss, as compared to the situation that no trust was placed. And finally, the trustor and the trustee do not act simultaneously. In other words: it takes a while before the trustee reacts on the trust given by the trustor (Mosch, 2004). These three aspects combined imply a risk for the trustor to engage in the transaction. This risk arises from the possibility for the trustee to act in an opportunistic way. This means that the trustee could gain an extra benefit at the expense of his transaction partner (trustor). In these situations, trustworthiness is regarded as the characteristic of a party to refrain from opportunistic behaviour. Trust is therefore the expectation of the actor that the other will behave trustworthy (Mosch, 2004).

The above described forms of trust are forms of horizontal trust, i.e. trust of people in other people. In this fragment attention is given on vertical trust, i.e. trust of people in institutions (Mosch, 2004). Institutions are here defined as all formal organisations, like the church, the police, the army, private companies et cetera. Vertical trust is a difficult kind of trust, in the sense that it is much easier to trust a person than an abstract, anonymous organisation (Mosch, 2004). Paradoxically institutions need to be trusted to be effective, especially when they are created to foster trust. The level of vertical trust is considered to be a major indicator of the efficiency of a society (Mosch, 2004). Although institutional trust does not neatly fit in most social capital definitions, it is commonly thought to be part of it. The reason for this being that there is a strong link between interpersonal trust, generalised trust and trust in institutions (Mosch, 2004).

### **2.3.2 Networks**

Networks are generally seen as the core of social capital. Networks are the structures of social ties between people. In this paragraph the potential positive and negative external effects that arise from social networks are discussed.

#### *Positive externalities of networks*

With regard to the positive externalities of networks, the works of Putnam are again highly influential. In his 1993 study on economic performance and governmental efficiency in the northern and southern regions of Italy, Putnam argues that social networks “instill in their members habits of cooperation, solidarity and public-spiritedness” (Putnam, 1993). In other words: social networks generate reciprocity and mutual trust. These norms of reciprocity and trustworthiness, which emerge between members of a network as a result of frequent face-to-face contact and working for a common goal, are reinforced by the social control and sanction mechanisms of the network (Mosch, 2004).

According to Putnam (1993) all types of associations, organisations and clubs in which people interact with each other create positive external benefits for society. This is because the norms of cooperation that are formed in the associations spill over to other parts of society outside the associations. The reason for the existence of the organisation or the goal of the social network is not important, only its

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structure is of importance (Mosch, 2004). Putnam therefore distinguishes between horizontal and vertical networks. Horizontal networks are networks in which the members are of equivalent status and power. Vertical networks are networks with a hierarchical power structure. Because horizontal networks have higher trust and civic norms they generate more capacities than vertical networks (Putnam, 1993). In vertical networks, people may feel restrained in commenting and correcting each other's behaviour, especially when the other is one's superior.

Besides intra-network connections, there are also connections between networks. In this respect Putnam (2000) introduced the difference between bonding and bridging social capital. Bonding social capital refers to the density and homogeneity of the network. Bridging capital refers to the connections between heterogeneous people and networks. Bridging social capital are networks that are outward looking and encompass people across diverse social backgrounds (Putnam, 2000). Bonding social capital, on the other hand, is inward looking and tends to reinforce exclusive identities and homogeneous groups (Putnam, 2000). From an individual level perspective, one can say that bonding social capital is "good for getting by" (Mosch, 2004). The bridging type of social capital is thought to be the most valuable for society, because it "glues" the different parts together. From an individual level perspective, one can say that bridging social capital is "good for getting ahead" (Mosch, 2004). This is explained in the following manner: bridging capital prevents the isolation of particular groups in society and it makes resources available to a larger share of people. This idea is closely connected to Granovetter's strength of weak ties. According to Granovetter (1973) weak ties are the connections with people from outside your core network. These people are somewhat different from you, e.g. they live in another region, work in other organisations or made more progress in their career. These differences enable them to provide you with (unexpected) information and opportunities that lay outside your direct working and living environment (Mosch, 2004).

#### *Negative externalities of networks*

So far only the beneficial effects of networks have been examined. They create norms of reciprocity and trust on the scale of society and they provide information and opportunities. However, some contrasting opinions about the positive externalities of social networks and associational activity also exist. The main argument comes from Olson (Mosch, 2004). Although Olson (1982) strongly agrees that the networks deliver benefits for the individual members of networks, he has serious doubts about the positive character of the external benefits for *society*, just because these networks provide benefits for individual members. It is not hard to believe that this is the case with all types of criminal and racists associations. These closed networks create strong within-group norms and trust, which enables the members to cooperate in order to achieve their illegal goals (Mosch, 2004). Almost by definition, these networks have negative externalities on society. Olson's argument goes further than this. He also suspects all types of legal organisation to have negative externalities on society (Mosch, 2004). This can be explained as followed: if the economic goals of a group conflict with those of other groups or of unorganised interests, the overall effect of group membership could be negative (Knack and Keefer, 1997). According to Olson (1982) all associations must be seen as "special interests groups". Special interest groups try to promote their special interest by lobbying at the government to install new laws that protect their interest, but also worsen the interests of their antagonists. In doing so, these special interest groups impose disproportionate costs on society (Olson, 1982). Olson's view is not new and could even be called a reflection of the well known words of Adam Smith (1776):

*"People of the same trade seldom meet together, even for merriment and diversion, but the conversation ends in a conspiracy against the public, or in some contrivance to raise prices."*

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Based on the theoretical discussion above, it is not possible to give a clear conclusion about whether Putnam or Olson is right. According to Mosch (2004) different types of organisations have different effects on social capital. There are three types of organisations: primary, secondary and tertiary organisations. Primary organisations are considered to be intense family relationships. Secondary organisations are the so-called “face-to-face” organisations, because membership of these organisations implies joint actions and many personal contacts. Examples of secondary organisations are sport activities and churches. Finally, there are the tertiary organisations which are called “paper-and-pencil”, “check-and-mail” or “mailing-list” organisations. Putnam (2000) considers Greenpeace to be such kind of organisation; members of Greenpeace do not meet their fellow members regularly to discuss environmental issues, but just donate a sum of money and receive a magazine in return. In Putnam’s view tertiary organisations are organisations in which membership is essentially a device for fundraising (Putnam, 2000). All types of organisations imply “involvement” and create network externalities, but to a different extent. Because repeated personal interaction is the necessary ingredient for the creation of norms of reciprocity and trust, membership of tertiary organisations has less beneficial effects for emergence of mutual trust and civic norms than the other two types of organisations (Mosch, 2004). Thus, if the rise in membership only accrues to tertiary organisations, while the secondary organisations lose members, the net effect for society of this switch between organisations on the creation of norms and trust might be negative (Mosch, 2004).

### 2.3.3 Norms

The last part of Putnam’s definition of social capital considers norms. One definition of a norm is that it is “a prescribed guide for conduct or action which is generally complied with by the members of a society” (Ullmann-Margalit, 1977). Norms are considered to be the concrete elaborations of the group’s values, which are the abstract and ethical principles that lie at the roots of cultures. Putnam considers norms in several ways. First of all he gives special attention to norms of generalised reciprocity. This type of norms refer to

*“a continuing relationship of exchange that is at any given time unrequited or imbalanced, but that involves mutual expectations that is benefit granted now should be repaid in the future” (Putnam, 1993).*

Besides these norms of generalised reciprocity, Putnam (1993) also considers a broader range of norms that consist of civic virtues and norms of civic cooperation.

Norms of civic cooperation and generalised reciprocity are inherently “good” in the sense that they exhibit positive externalities (Mosch, 2004). They tell you to be honest, to be fair, to be trustworthy, to help people in need, to obey the law, to not steal and so on. Since these norms have positive externalities, there cannot be too much of them and they cannot be too much obeyed (Mosch, 2004). Markets may fail to produce the optimal quantity of them. This can be seen as an indication that government intervention may be required to reach the “optimal” provision of social norms (Den Butter and Mosch, 2003). It is not easy for governments to do such a thing though. By definition government policies are based on formal norms and work with formal forms (Mosch, 2004). Formal norms have the tendency to crowd-out informal norms. A high equilibrium situation in which informal norms enable people to work together for the provision of a particular public good may easily be disturbed by formal rules that try to strengthen or professionalize the informal system (Mosch, 2004). The idea that the provision of the common good is a problem of the community implies that the whole community is morally obliged to partake in its provision. This idea is swept aside when outsiders (e.g. government) have taken over the responsibility to fulfil this task (Mosch, 2004). This

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can be considered a problem when for some reasons the new system does not work properly or disappears after some time, and the old norms of cooperation are not easily re-installed (Mosch, 2004).

To illustrate this point, Mosch (2004) gives an example of a study conducted by Ostrom (2000) on irrigation projects in villages in developing countries. Irrigation is a typical social coordination problem. It would be best for all villagers if everybody would partake in the building and maintenance of an irrigation system, but there are individual incentives to free-ride. Despite this, most of the villages have managed to create some sort of social norm that guarantees the provision of this public good. Ostrom describes how these old irrigation systems became replaced by modern systems that were financed and set up by national governments and foreign aid agencies (Mosch, 2004). Due to better materials and paid maintenance this led to improved irrigation. When the projects ran out of money or were stopped because of changed governmental priorities, the new irrigation systems collapsed. The reason for this being that the local villagers did not know how to keep the systems running. What was even worse than this was that the old systems did not return. The new system had eroded the old norms of cooperation and the villagers were therefore worse off than in than in the situation before the new irrigation project started (Mosch, 2004).

## **2.4 Theoretical and empirical weaknesses**

The distinction between networks, norms and trust indicates that social capital can be seen from different angles (Mosch, 2004). Researchers have tried to link these angles (economic, psychological, social and political) and the research of social capital has therefore become interdisciplinary by nature, which makes it vulnerable to becoming chaotic and ambiguous. According to Michael Woolcock (1998), social capital now assumes a wide variety of meanings and has been cited in rapidly increasing number of social, political and economic studies, but with limited critical attention given to its intellectual history or its conceptual and ontological status. He therefore argues that several theoretical and empirical weaknesses emerge as a result (Woolcock, 1998).

First, social capital's revisionist grounding in different sociological traditions risks trying to explain too much with too little (Woolcock, 1998). He continues by giving different conceptualizations of social capital. For example, rational choice theorists regard social capital as an informal resource emerging as a result of interaction between rational agents needing to coordinate for mutual benefit (see also Coleman, paragraph 2.2.2). For network theorists, on the other hand, social capital is one's non-rational ties. Woolcock (1998) therefore poses the question; if social capital can be rational, pre-rational, or even non-rational, what is it not? At the very least this difference in the conceptualization of social capital suggests that there may be various forms or dimensions of it (Woolcock, 1998).

Secondly, Woolcock (1998) explains the difficulty of distinguishing between the sources of social capital and the benefits derived from them. An example of this is that social capital can be classified as a public good (see also Coleman, paragraph 2.2.2) under-produced by society. Social capital in the form of trust is created as a by-product of other collective activities such as the participation in civic associations. However these activities are themselves public goods and are also identified as social capital (Woolcock, 1998). Causes and effects of social capital are not disentangled and thus give rise to much circular reasoning.

Thirdly, most discussions of social capital proclaim it an unqualified "good", i.e. something to be maximized. That this is not necessarily the case was already shown briefly in paragraph 2.3.2 on the



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negative externalities of networks. Woolcock (1998) therefore supports the view that social capital has both “benefits” and “costs” and that groups can possess “too much” or “too little” of it in terms of the amount required for efficient economic exchange. This suggests that there may be different types of social capital, and that collectively they are resources to be optimized, not maximized (Woolcock, 1998).

## **2.5 Conclusion**

The concept of social capital has begun as a relatively simple concept, and it has evolved rapidly into a rather more complex theory of people’s relationships and their value. The ideas on social capital have largely been developed by the writings of Bourdieu, Coleman and Putnam. Although these authors differ in their emphasis, they all consider that social capital consists of personal connections and interpersonal interaction, together with the shared sets of values that are associated with these contacts. The central idea behind social capital is that networks are a valuable asset. Networks provide a basis for social cohesion, because they enable people to cooperate with each other for mutual advantage.

A theory that draws attention to the importance of social relationships and values such as trust is highly attractive to many people. However it has also attracted critics, who believe the theory of social capital, possesses some serious theoretical and empirical weaknesses. Here it is important to realize that the concept of social capital is relatively immature. More work needs to be done before the concept of social capital has achieved any kind of theoretical maturity.

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## Chapter 3: Social capital and economic development

### 3.1 The effect of social capital on economics

A growing body of research suggests that social capital influences a wide range of significant economic and political phenomena (Glaeser et al. 2000a). Many argue that elements of a society's norms, culture or social capital are central to understanding its development. Others claim that social capital contributes to the formation of obligations, expectations, trust and sanctions, all of which assist economic exchange by mitigating contracting costs (Routledge and Von Amsberg, 1996). However these notions have been difficult to capture in economic models (Francois and Zabochnik, 2003). In recent years, economists have tried to identify the impact of social capital by using attitudinal measures of trust from survey questionnaires (Glaeser et al. 2000a). The factors trust and cooperation are here identified as the two key indicators of social capital in reference to economic development. In this chapter the relations between trust, (economic) cooperation and economic performance are explored from the broader perspective of social capital.

#### 3.1.1 The importance of trust

"Trust is a lubricant of cooperation" (Dasgupta, 1988). This short quote forms the key explanation of the importance of trust for economic welfare (Mosch, 2004). According to Fukuyama (1995) certain societies are endowed with, what he calls, generalised trust. These societies therefore enjoy a certain form of social capital that contributes to their success in modern economic competition (Fukuyama, 1995). He argues that non family or generalised trust is of importance for successful performance in advanced economies. The question still remains, *how* does trust affect economic performance? According to an often cited Nobel prize-winning economist Kenneth Arrow:

*"Virtually every commercial transaction has within itself an element of trust, certainly any transaction conducted over a period of time. It can be plausibly argued that much of the economic backwardness in the world can be explained by a lack of mutual confidence"* (1972)

This kind of reasoning suggests that social capital, defined in terms of interpersonal trust, has a very important influence on all aspects of the economy (Whitely, 2000). Based on the social capital literature it is possible to formulate several assumptions of the impact of trust on economic performance.

- Firstly, economic activities that require some actors to rely on the future actions of others are accomplished at lower cost in higher-trust environments (Glaeser et al. 2000a). In other words: individuals in higher-trust societies spend less money to protect themselves from being exploited in economic transactions. Therefore written contracts are less likely to be needed and they don't have to specify every possible contingency.
- Secondly there is the assumption that low trust can discourage innovation. The idea behind this assumption is that when entrepreneurs have to devote more time to monitoring possible malpractice by their partners, employees and suppliers, they have less time to devote to innovation in new products or processes (Glaeser et al. 2000a).

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- Thirdly, high-trust societies are less dependent on formal institutions to enforce agreements (Glaeser et al. 2000a). There are supposedly two reasons for this. Informal credit markets dependent on strong interpersonal trust can facilitate investment where there is no well-developed formal system of financial intermediation. Besides this, interpersonal trust can also provide an imperfect substitute for government-backed property rights or contract enforcement where governments are unable or unwilling to provide them.
  - Fourthly, government officials in higher trust societies may be perceived as more trustworthy, and their policy pronouncements thus as being more credible (Glaeser et al. 2000a). In such a situation trust triggers greater investment and other economic activity. For example in these societies people adopt more appropriate horizons in making investment decisions, and choose production technologies that are optimal over the long, rather than short, run.
  - Further, trusting societies are more likely to have higher returns to accumulation of human capital (Glaeser et al. 2000a). The assumption behind this is that where trust improves access to credit for the poor, enrolment in secondary education may be higher.
  - Finally, in low-trust societies hiring (of staff) decisions will be influenced more by trustworthy personal attributes of applicants (e.g. blood ties) and less by educational credentials, than in high trust societies. This reduces the returns to acquisition of educational credentials in low-trust societies (Glaeser et al. 2000a).

### 3.1.2 The importance of cooperation

Regarding the function of cooperation and its link to economic growth, the theory is less clear than with respect to trust (Bertrand et al. 2000). It is possible to formulate two functions of associational activity on welfare. The first has already been mentioned in chapter two, in the paragraph on Putnam. To summarise; Putnam (1993) states that network relations improve the efficiency of society by facilitating coordinated actions. The second function is closely related to the theory of networks and the advantages of being embedded in networks. There are two theoretical approaches for understanding how social relations and networks create economic and social benefits (Gargiulo and Benassi 2000). The weak-tie approach argues that a large network of arm's-length ties is most advantageous. On the other hand there is the strong-tie approach which claims that a closed tightly knit network of embedded ties is most advantageous (Beugelsdijk and Van Schaik, 2001).

This corresponds with the two opposite views in literature on the optimal structure of networks (Beugelsdijk and Van Schaik, 2001). Whereas Coleman (1990) argues that closed networks may provide a better basis for cooperation, Burt sees cohesive ties as a source of rigidity. In both cases the core of the argument relates to the transfer of knowledge between actors. In Burt's (1992) concept, structural holes (open networks) are important sources of new information. Coleman's closed network approach seems to be opposite to Burt's view of structural holes. Coleman namely states that the closure of the network and the embeddedness of the actors provide opportunities to obtain information that otherwise would be impossible or too expensive to obtain (Beugelsdijk and Van Schaik, 2001).

In both views, embeddedness in networks creates advantages like increased sources of information, and obtaining information that is not easily available (spillover effects). The effects of networks will be discussed more thoroughly in the chapter four.

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### 3.1.3 Trust and cooperation in economic literature

The assumptions that are presented in these paragraphs do not stand on their own. They are embedded in the innumerable ideas of economists and other social scientists that have studied trust and related issues before. This paragraph gives a short overview of how the various (economic) disciplines have been analysing trust and cooperation.

#### *Orthodox Neo-Classical Economics*

The trust aspect of transactions and cooperation has been neglected for a long time in economics (Mosch, 2004). In the “orthodox Neo-Classical Economics”, for instance, trust plays no role. According to this discipline all actors simply act in their own interests and no problems result. On the one hand this situation looks like an absence of trust, but on the other hand, it may be more a situation of complete trust. Since all actors and circumstances are considered to be predictable and fully known by all actors, there is no uncertainty, there is complete information and therefore trust is complete (Mosch, 2004). Trust is a completely abundant concept in this situation, because it is always there. In this orthodox neo classical world, transactions cause no coordination problems and go without transaction costs.

#### *Transaction Costs Economics and New Institutional Economics*

The situation of perfect information, complete trust and optimal economic behaviour is tilted upside down in the literature of the “Transaction Costs Economics” and the “New Institutional Economics” (Mosch, 2004). These disciplines question several of the assumptions of the orthodox neo-classical literature, mainly the assumptions of free and complete information and full rationality of the actors. Although these assumptions make it relatively easy to model human behaviour, they have also lost touch with reality. Reality comes closer to economic theorising when the assumptions of perfect, free information and full rationality are loosened, as done in the new institutional economics (Mosch, 2004). When information is not complete, the predictability of future events diminishes and uncertainty rises. Uncertainty, in this case, refers to the situation that the set of future events is unknown and that the probabilities that these events will happen are also unknown (Mosch, 2004). This implies that it is no longer possible to calculate “expected outcomes”. More importantly, when information is not freely available, transaction costs appear in (economic) transactions. In order to obtain information, actors now have to invest in a certain amount of information, but only to the extent that the marginal benefits of investment are equal to the marginal costs (Mosch, 2004). Because, in most cases, the costs of acquisition do not weigh up against the benefits of this extra information, people will not buy all information available. Both uncertainty, as the costs of complete information have caused incompleteness of information (Mosch, 2004). Therefore, in the literature of new institutional economics literature, the assumption of full rationality is replaced by the assumption of bounded rationality. According to the literature of transaction costs economics and new institutional economics; actors thus live in a world with uncertainty, transactions costs and bounded rationality.

In the new institutional economics, trust is binary: there is no trust at all or there is complete trust (Mosch, 2004). Williamson (1993) distinguishes between “calculative trust” and “blind trust”. Calculative trust is the consequence of careful calculations in response to behavioural risks (Williamson, 1993). In other words: an actor will only trust another actor, if his calculations show that it is beneficial for the other to act cooperatively. This, however, assumes complete information about the other’s options and motives and assumes the absence of uncertainty. This notion is contested by the literature of new institutional economics and accepting calculative trust as a real phenomenon is therefore no option (Mosch, 2004). Blind trust is trust that originates from empathy, friendship, love et cetera (Williamson, 1993). In the world of the new institutional economics, blind trust has no chance

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of survival in economic markets, because it will be exploited by those actors who are not touched by these emotions. Therefore, Williamson (1993) concludes trust is an irrelevant concept for studying economic behaviour.

#### *Behavioural Economics and Experimental Economics*

The third view on trust comes from the “Behavioural Economics” and “Experimental Economics” literature (Mosch, 2004). The behavioural economics literature tries to incorporate all sorts of incentives and preferences that influence the behaviour of (economic) actors in its theoretic framework. According to this literature, people have a preference for and/or derive utility from equality, fairness, honesty, reciprocity et cetera, and their individual behaviour is at least partly dependant on group norms and actions (Mosch, 2004). This approach offers new views on trust and cooperation that go beyond the idea that trust and cooperation only evolve as a result of calculations of expected material payoffs.

Although the literature is still in its developing phase and its results are still disputed, the behaviouralists have incorporated valuable insights from other social sciences (Mosch, 2004). An important notion from sociology for the study of economic transactions and coordination is the idea of embeddedness. The idea of embeddedness comes originally from Karl Polanyi, but was introduced to contemporary sociologists by Granovetter (Woolcock, 1998). Embeddedness implies that all forms of economic exchange are inherently embedded in social relations (Granovetter, 1985) that go beyond strictly rational or monetary values (Boschma et al. 2002). In other words: the cultural background, the political environment, and the social ties of actors affect their behaviour. This embeddedness perspective sees personal ties of trust and loyalty (rather than impersonal transactions) as elements that support economic behaviour and development (Håkansson and Johanson, 1993). In economic geography, Granovetter’s notion of embeddedness has been widely adopted because it revives the idea that firms are firmly linked to their local production environment in a world of increasing globalisation (Boschma et al. 2002).

#### *Network Economics*

Although these insights from other social sciences lead to improvements and adjustments of the orthodox economic view on human behaviour, it doesn’t come without any costs (Mosch, 2004). The main reason for this is that it makes the use of formal modelling far more difficult. There have, however, been some attempts to model these new aspects. In the field of “Network Economics” effort has been put in modelling aspects of network formation and optimal network structures (Mosch, 2004). The network economics literature argues that the information of an (additional) link impose some costs that have to be compared with the additional benefits. Usually, the costs are fixed, but the benefits depend on the size and structure of the network, thus leading to externalities for the entire network (Katz and Shapiro, 1985). Although these models take the existence of networks as the core theme and are in this sense contributing to the existing economic literature, they are focused on analysing optimal network structures and the resulting network externalities in an orthodox neo-classical framework (Mosch, 2004). As already stated before, in orthodox neo-classical economics trust plays no role.

The concept of social capital has been widely discussed by economists and been viewed upon from different disciplines of economics. Bourdieu’s approach of social capital, for example is consistent with an economic (individual optimizing subject to constraints) view of social interactions (Sobel, 2002). Coleman tried to use the concept of social capital in order to be able to explain how people manage to cooperate with help of the rational choice theory. Putnam has a different view on social capital, and emphasises importance of the social networks. His view corresponds therefore with the disciplines of

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behavioural economics and (in some ways also with) network economics. Social capital, in this view, covers more or less the broad, contextual meaning of embeddedness (Boschma et al. 2002).

### 3.2 Empirical research on social capital and economic development

The empirical research on the effects of social capital has a strong and clear theoretical basis. It therefore has been argued that, if social capital is to be more than a “buzzword” its stock should somehow be measurable. A growing body of research documents significant correlations between social capital variables and important economic outcomes (Glaeser et al. 2000b). Several of them will be discussed more thoroughly in the remainder of this paragraph.

#### *Putnam*

Robert Putnam has jump-started the research on social capital when he found a strong correlation between measures of civic engagement and governmental quality across regions in Italy (see also 2.2.3). His research in Italy has provided us with evidence that several characteristics of civic community are important in developing successful institutions. He even finds proof that contemporary development in the Italian regions is better explained by the civic conditions in those regions in the 19<sup>th</sup> century, rather than by their level of economic development at that time. In other words: politics appears to have a more important influence on economic development than does economics (Whitely, 2000). Putnam’s research has raised the interest of economists in more culturally based factors that influence economic growth (Beugelsdijk et al. 2002)

#### *Knack and Keefer*

In 1997 Stephen Knack and Philip Keefer present the first strong evidence that social capital matters for measurable economic performance, using indicators of trust and civic norms from the World Values Surveys for a sample of 29 market economies. In their paper “Does social capital have an economic payoff?” they find that a one-standard deviation increase in a survey-based measure of country level trust, increases economic growth by more than one half of a standard deviation (Knack and Keefer, 1997). In other words: a ten percentage point rise in the variable trust is associated with an increase in (economic) growth of four-fifths of a percentage point.

Three main conclusions can be formulated in reference to this research. Firstly, that trust and civic cooperation are associated with stronger economic performance. Their second conclusion is that associational activity is not correlated with economic performance (Keefer and Knack, 1997). This is contrary to the findings of Putnam (1993) across Italian regions. And their final conclusion is that trust and civic cooperation are stronger in countries with formal institutions that effectively protect property and contract rights and in countries that are less polarized along lines of class or ethnicity.

The measurements of Knack and Keefer have endured criticism from other authors. In a paper by Beugelsdijk, De Groot and Van Schaik (2002), the robustness of the results obtained by Knack and Keefer are analysed along three dimensions of robustness. First they concentrate on the statistical significance of trust. The second dimension, along which they explore the robustness of the results on trust, is the influence of changing sets of conditioning variables on the estimated effect of trust. Finally they analyse the sensitivity of the results using different proxies for basic variables like human capital and the rate of capital accumulation. They are then able to conclude that Knack and Keefer’s conclusion on trust is not as robust as it might appear. Both in terms of significance and size it is still not clear whether trust has an economic pay-off, and if so, how large it is (Beugelsdijk et al. 2002). Another main finding is that the significant and positive effect of trust and growth in Knack and

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Keefer's analysis is driven by specific operationalisations in their independent variable that proxies the investment ratio (Beugelsdijk et al, 2002). They therefore conclude that the robustness of the relationship between trust and growth, in terms of both the size and the significance of the estimated effect, is highly dependent on the set of conditioning variables. Adding to this conclusion, they also claim that it is therefore difficult to provide an answer to the question whether there is an economic pay-off of trust on the basis of cross sectional empirical growth studies (Beugelsdijk et al. 2002).

*Glaeser, Liabson, Scheinkman and Soutter*

The method of research, explaining relations of trust with survey results, has also been criticised by Glaeser, Liabson, Scheinkman and Soutter in 2000. They argue that though survey questions are interesting, they are also vague, abstract and hard to interpret. Therefore they constructed a new method to measure trust and trustworthiness, in which they combine two experiments: trust games with monetary rewards and surveys. The results of this research shed a new light on the finding of the authors listed above. Their main finding is that standard attitudinal survey questions about trust predict trustworthy behaviour much better than they predict trusting behaviour. Trusting behaviour, on the other hand, correlates with past trusting behaviour. In other words: to determine if someone is trusting, ask him about specific instances of past trusting behaviours. To determine whether someone is trustworthy, ask him if he trusts others (Glaeser et al. 2000a).

They also found that trusting behaviour has a stable individual-specific component (Glaeser et al. 2000a). Other (additional) results from these experiments are that social connection strongly predicts trustworthiness and weakly predicts trust. In particular, national and racial differences strongly predict a tendency to cheat one another. This is in agreement what Keefer and Knack found on the effects of polarization. Secondly, they found that individual characteristics that relate to family status, social skill and charisma strongly predict one's total financial returns in the trust games. According to the authors this suggests that some people have "individual social capital" that reflects an ability to earn returns from social situations. In other words: high status individuals are able to elicit more trustworthiness in others (Glaeser et al. 2000a).

*Glaeser, Liabson and Sacerdote*

An economic approach to (individual) social capital has been developed by Glaeser, Liabson and Sacerdote in 2000. In their research method they analyse the formation of social capital using a model of optimal individual investment decisions. This approach contrasts with group-based analyses, which emphasize institutions, norms and aggregate (group) outcomes, rather than the decisions of individual actors (Glaeser et al. 2000b). They treat the individual's accumulation of social capital as an investment decision (Francois and Zabojsnik, 2003). This individual social capital should then be aggregated to measure the social capital of a community (Glaeser et al. 2000b). In their paper "An economic approach to social capital" they present evidence that this individual based economic approach better explains the observed social capital than can be explained by group-level variables

### **3.3 A conceptual policy framework**

This chapter so far suggests that investing in social capital formation is a potentially useful component of better economic development theory and policy. Nonetheless it appears highly problematic to create a conceptual policy framework on social capital. There are several reasons for this difficulty. Woolcock (1998) gives three reasons why it is difficult to create a general policy framework on social capital. Firstly, the nature and extent of social relations (factor of social capital) vary within and among different institutional sectors. Woolcock secondly claims that the tasks performed by these

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relationships necessarily change as economic exchange becomes more sophisticated. Thirdly, both “too little” and “too much” social capital at any given institutional level can impede economic performance (Woolcock, 1998). An implication of these problems is that an economic development policy based on the facilitation of social capital must not only be a resource that helps to overcome *static* dilemmas of collective action; but it must also be called upon in the course of resolving *dynamic* organizational dilemmas. To accomplish this, policies must achieve a complex dynamic between “top-down” and “bottom-up” incentives to the formation of social capital (Woolcock, 1998).

Woolcock (1998) provides a framework of the different levels, dimensions and combinations of social capital (i.e. social relations) that illustrates the necessary dynamic. Woolcock distinguishes 4 types of social ties, which all vary in their degree of “embeddedness” and “autonomy”:

- Intra-community ties (which he refers to as Integration)
- Extra-community ties (which he refers to as Linkage)
- Extra-community networks (which he refers to as Synergy)
- State-society relations (which he refers to as Organizational Integrity)

In the late 1980s, the embeddedness thesis was incorporated into research on economic development (see also paragraph 3.1.2 and 3.1.3). Three common claims emerged from this research. The first was that all forms of exchange are inherently embedded in social relationships (Woolcock, 1998). The second claim was that embeddedness itself could take several distinct forms, like social ties, cultural practices and political contexts. All these had a powerful effect on shaping the types of opportunities and constraints individuals faced as they sought economic advancement (Woolcock, 1998). The final claim was that the many benefits gained by embeddedness in a given network were not without corresponding costs. This is explained as follows: the high degree of density and closure characterizing the social relations under-girding the relatively, small scale, informal exchange in village markets (for example), could in fact impose considerable constraints on successful members of these communities as they attempted to make the transition to larger, more extensive and sophisticated exchange networks (Woolcock, 1998).

In order to establish whether the costs or benefits of embeddedness prevailed in any given situation, scholars began suggesting that the presence or absence of a complementary set of autonomous social ties needed to be incorporated into the analysis (Woolcock, 1998). This means, for example, focussing on the extent to which community members also had access to a range of *non*-community members. Actors had to be able to draw on both “embedded” and on “autonomous” social ties.

By the late 1980s, the nature and extent of combinations of embedded and autonomous ties was emerging as the general conceptual framework within which the new sociology of economic development sought to address substantive issues at both the micro and macro level. By the mid-1990s, scholars have explicitly identified embedded and autonomous social relations as distinct forms of social capital (Woolcock, 1998).

The sense in which “embeddedness” and “autonomy” is employed at the micro and macro level is not the same. Embeddedness at the micro level refers to intra-community ties, whereas at the macro level it refers to state-community networks (Woolcock, 1998). Autonomy at the micro level refers to extra-community networks, while at the macro level it refers to institutional capacity and credibility (see figure 3.1) (Woolcock, 1998).



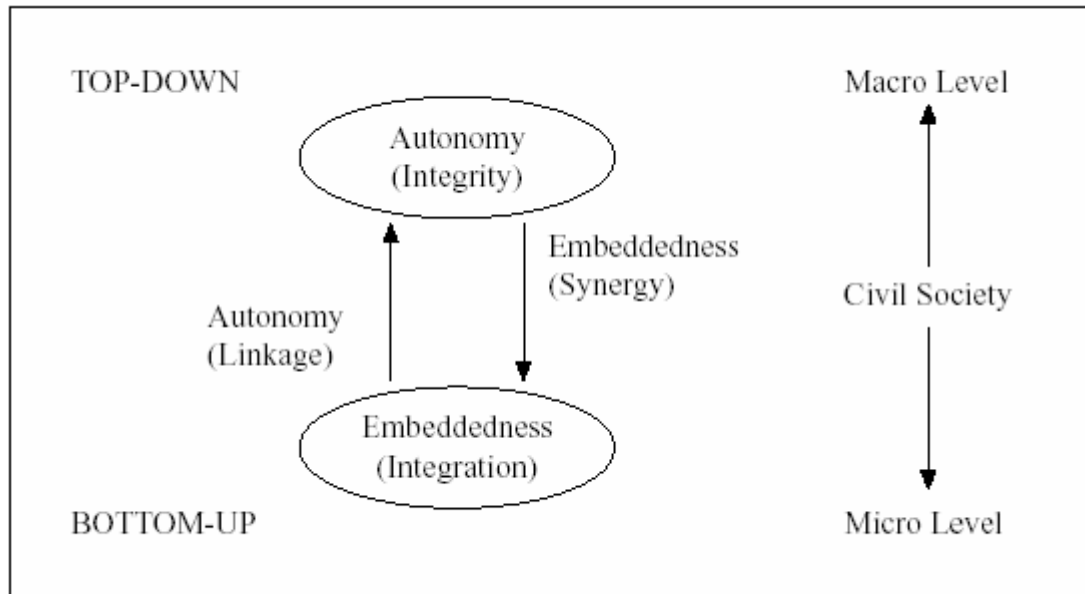


Figure 3.1: Top-down and bottom-up development and the forms of social capital (Woolcock, 1998)

Different combinations of these four distinct dimensions of social capital –integration, linkage, synergy and integrity- can account for a range of development outcomes; from anarchic individualism (total absence of social capital) to beneficent autonomy (total presence of social capital) (Woolcock, 1998). The same dimensions of social capital can thus serve very different developmental purposes when combined with other forms. As such, Woolcock (1998) claims that social relationships in general constitute a unique, vitally important, but nonetheless highly problematic resource in terms of effecting positive developmental outcomes, and are thus the basis of theoretical and policy dilemmas. In order to clarify the basis of these dilemmas, these will be examined further, after distinguishing between bottom-up and top-down dilemmas.

### 3.3.1 The micro level: bottom-up

“Bottom-up development initiatives are those that emerge or take place at the local (or grassroots) level. Bottom-up development functions in and through social relations among people with common neighbourhood, ethnic, religious or familial ties (Woolcock, 1998). In other words: those with large stocks of social integration. As such, integration constitutes an important source of capital, because it enables participants to provide one another with services and resources. This can range from child minding to job referrals. The more intensive the social relations and generalized trust within a given community, the higher its stock of (this form of) social capital. There is a dilemma, however, since more is not necessarily better. Where generalized trust extends *only* to immediate family members and blood relatives, this is likely to have a non-developmental result. This is called “amoral familism” and it is characterized by an “excess of community”, built on such fierce ethnic loyalties and familial attachments that members are discouraged from advancing economically and moving geographically (Woolcock, 1998). It is thus characterized by the presence of social integration (intra-community networks), but the absence of linkage (extra- community networks). “Amoral individualism” on the other hand, exists where there is neither familial nor generalized trust, where narrow self-interest permeates all social and economic activity and where members are isolated – either by circumstance or discrimination- from all forms of cohesive social networks (Woolcock, 1998). It is thus characterized by the absence of both integration and linkage. “Anomie” is characterized by the presence of linkage,

but the absence of integration. In this case individuals have the freedom and opportunity to participate in a wide range of activities but lack the stable community base to provide factors like guidance, support and identity (Woolcock, 1998). This type is classically associated with urban settings and modernization. For developmental outcomes to be achieved in poor communities, for example, linkage needs to be combined with integration. If this is the case, this is called “social opportunity”. Figure 3.2 gives an overview of all bottom-up dilemmas.

<b>LINKAGE</b> (Extra-community networks)	<i>High</i>	Anomie	Social opportunity
	<i>Low</i>	“Amoral individualism”	“Amoral familism”
		<i>Low</i>	<i>High</i>
		<b>INTEGRATION</b> (Intra-community ties)	

Figure 3.2: Integration and Linkage in bottom-up dilemmas of development (Woolcock, 1998)

Granovetter proposes a solution to these bottom-up dilemmas, involving a social mechanism he calls “coupling and decoupling” (Woolcock, 1998). In this mechanism members of economic groups draw initially upon the resources of family and peers, but then attempt to forge broader and more autonomous ties beyond the group, as their need for larger markets and more sophisticated inputs expands. It can therefore be concluded that a community’s stock of social capital in the form of integration can be the basis for launching development initiatives, but it must be complemented over time by the construction of new forms of social capital (i.e. linkages to non-community members) (Woolcock, 1998).

**3.3.2 The macro level: top-down**

The nature of state-society relations is considered crucial to understanding both the prospects of economic groups and, in turn, their efficacy in shaping the willingness and ability of the state to act in a developmental manner (Woolcock, 1998). Here also a range of developmental outcomes are possible. The outcome depends on the prevailing combinations of the state’s organizational capacity and its engagement with and responsiveness to civil society (Woolcock, 1998). At one extreme are the so-called “collapsed states”. This type is characterized with a presence of neither organizational integrity nor synergy. Collapsed states are closely related to “predatory states”. Predatory states (or Rogue states) are effective at least in the sense that they are able to carry out their narrow agendas (Woolcock, 1998). States like this have a low level of organizational integrity, but a modest degree of synergy. This combination is hardly conducive to developmental outcomes; in fact, it can actively reduce average living standards (Woolcock, 1998). Organizational integrity without synergy can be equally unproductive. In this situation there is “too much” bureaucracy and “too little” civil society (Woolcock, 1998). Societies like this are termed “weak states”. Where there is a sustained and dynamic interaction between a competent, responsive state and its various constituents, we find prosperous and equitable economies (Woolcock, 1998). In this case both integrity and synergy are high. The appropriate term for this type is “developmental states”. Here state-society relations are characterized by “embedded autonomy”, in which a coherent, connected and cohesive development framework

emerges as a result of a concrete set of social ties which bind the state to society (Woolcock, 1998). Figure 3.3 gives an overview of the dilemmas facing top-down development schemes.

		<b>ORGANIZATIONAL INTEGRITY</b> (Corporate coherence and capacity)	
		<i>Low</i>	<i>High</i>
<b>SYNERGY</b> (State-society relations)	<i>Low</i>	<b>Anarchy</b> (Collapsed states)	<b>Inefficiency, ineffectiveness</b> (Weak states)
	<i>High</i>	<b>Predation, corruption</b> (Rogue states)	<b>Cooperation, accountability, flexibility</b> (Developmental states)

Figure 3.3: Organizational integrity and Synergy in top-down dilemmas of development (Woolcock, 1998)

To summarize, Woolcock (1998) contends that development outcomes are shaped by the extent to which basic social dilemmas at the micro and macro level are resolved. Positive outcomes are attained to the extent that both embedded and autonomous social relations prevail at both levels. This happens when people are willing and able to draw on nurturing social ties:

- Within their local communities
- Between local communities and groups with external and more extensive social connections to civil society
- Between civil society and macro-level institutions
- Within corporate sector institutions.

All four dimensions have to be present to come to optimal developmental outcomes (Woolcock, 1998). This successful interaction within and between bottom-up and top-down initiatives is the cumulative product of an on-going process that, according to Woolcock (1998) entails “getting the social relations right”. If the social relations are “wrong” (i.e. one or more of the four dimensions listed above is absent) then development outcomes will be sub-optimal.

It can be concluded that there is no such thing as a “general social capital policy framework”. Rather than seeing social capital as either an intrinsically negative or positive social phenomenon, Woolcock (1998) argues that any particular form of social capital will have simultaneously benefits and disadvantages and that the balance between these will vary from context to context. Whether a country thus succeeds or fails in economic development is determined by the structure of the state, the nature and extent of its involvement in civic and corporate life and the organization of society together. Too much or too little integration at either the macro- or micro-levels can impede development, and the balance of top-down and bottom-up must constantly shift for development to be sustained (McNaughton, 2000). As a result, there are four types of social capital. The presence or absence of one of more of these types, and their interaction with each other, influences the economic outcome. In this sense, Woolcock offers a framework within which top-down and bottom-up social capital based programmes can be designed and evaluated.

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### 3.4 Conclusion

In explaining the economic performance of countries much attention is focused on so-called soft factors. Here the (soft) factors trust and cooperation are identified as the two key indicators of social capital in reference to economic development. How does trust affect economic performance? There are many assumptions on how trust influences economics. These range from the dependency on formal institutions to educational credentials. These assumptions are based on the idea that trust can lower transaction costs; that trust helps surmount opportunistic behaviour and that it facilitates norms of reciprocity and cooperation.

Regarding the function of cooperation and its link to economic growth, the theory is less clear than with respect to trust. Nonetheless it is possible to formulate two possible functions. The first speculates that network relations improve the efficiency of society by facilitating coordinated actions. The second focuses on the advantages of being embedded in networks, like increased sources of information, and the obtaining information that is not easily available (spillover effects).

In recent years a number of researches have been conducted in order to find out whether these theoretical speculations are in compliance with reality. This thesis discussed four, which all found evidence of the potential influence of social capital on economic and governmental performance.

This suggests that investing in social capital formation is a potentially useful component of better economic development theory and policy. However, as the final paragraph in this chapter has shown, this is very complex. Whether a given country succeeds or fails in economic development is determined by a lot of factors such as the structure of the state, the nature and extent of its involvement in civic and corporate life and the organization of society together. Since these factors vary per country, is not possible to formulate a “general social capital policy framework”.

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## Chapter 4: Social capital and economic geography

### 4.1 Renewed interest in the role of geography

So far this discussion on social capital has been primarily non-spatial. This chapter will try to explain the link between geography, economic development and factors of social capital, especially trust. In the last two decades there has been a widespread revival of both economic and public policy interest in the links between geography, trade and economic growth. There are several reasons for this renewed interest in the role which geography plays in determining economic growth. McCann (2003) gives three reasons: one reason is technological, the other is institutional and the last is analytical of nature. These three reasons will be discussed now in more detail.

#### 4.1.1 Technological

The rapid improvement in information, communications and transportations technologies has renewed the interest in economic impacts of geography. The main argument is that these technological advances have improved the ability of corporate and government decision-makers to coordinate either market or organizational activities across progressively larger geographical areas (McCann, 2003).

On the one hand, these improvements in information, communication and transports technologies are supposed to make transactions over progressively larger geographical areas easier (McCann, 2003). On the other hand, it is suggested that over time the development of these information technologies is actually leading to increase the relative importance of geographical proximity. The presumed reason for this is that an increase in the quantity, variety and complexity of information produced, itself increases the costs associated with transmitting this information across space, which also increases the need for spatial proximity (McCann, 2003). Much of the transmitted information will be of a tacit nature. There are two different types of information; tacit and explicit. Explicit information is known or articulated knowledge. This type of information can be easily written down and codified. Therefore is it easily communicated or shared with others. Tacit information on the other hand is personal, experiential and context specific. This type of information is hard to formulate and therefore hard to communicate or share with others. How is this tacit knowledge transmitted? The main answer to this question is that it can be transmitted through certain mechanisms of socialization and face-to-face contact. This means that opportunity costs involved in not having face-to-face contact will consequently increase with the quantity, variety and complexity of the information produced (McCann, 2003). The consequence of this is that doing business across a large geographical distance will entail increasing costs. In these cases the requirement for geographical proximity would appear to have increased to facilitate face-to-face contact (McCann, 2003) This is in agreement with Glaeser's (1998) observation that the transportation costs involved in ensuring that people have both widespread and frequent face-to-face contact across a range of individuals (in order to facilitate the transfer of tacit information) is the *crucial* force behind the generation of modern cities and industrial clusters.

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Even Putnam (2000) states that telecommunication enhancements is the most important trend towards greater social connectedness. The telephone provides an instructive example of this. The social implications of the telephone were badly misjudged for nearly half a century after its invention in 1876. The first comprehensive study of social impact of the telephone in 1933, found that this point-to-point medium (unlike mass media) reinforced existing ties more than distant ones. The phone-company records of the mid-1970s reinforce this idea. These records show that between 40 and 50 percent of all phone calls originating from a household were made within a two-mile radius, and 70 percent were made within a five-mile radius (Putnam, 2000). In other words: the telephone seems to have had the effect of reinforcing, not transforming or replacing, existing personal networks. McCann (2003) also gives evidence of this relation between density, frequency of telephone usage and the location of the users, by summing up the conclusions of a research conducted in 1998 by Gasper and Glaeser. Gasper and Glaeser (1998) find that users who are geographically closer together, and for whom greater face-to-face contact is therefore easier, spend more time talking to each other on the telephone, than do users who are at greater distances from each other. This evidence suggests that communications technology and face-to-face communication tend to be complements rather than substitutes.

#### **4.1.2 Institutional**

Besides these technological changes, there have also been widespread institutional changes within the global and regional trade frameworks. McCann (2003) argues that the movements towards free trade and integrated market areas (for example EU, NAFTA) have meant that the tariff structures associated with national borders may be becoming less important concerning their effects in shaping a nations economic performance. He continues by stating that these changes may lead to differential growth impacts between different geographical areas.

#### **4.1.3 Analytical**

There is much analytical evidence to suggest that these growth effects of continuing economic integration may be quite different between geographical areas (McCann, 2003). There are two literatures relevant here. The first is the work of Krugman in 1991, which argues that the uneven distribution of industrial activities across space is a natural result of market processes (McCann, 2003). The second is the work of Porter in 1990, who stated the importance of industrial clusters. The focus of both arguments lie on the role which geography can play in the fostering, facilitating and nurturing of flows of inter-firm information. These flows allow for the local generation of mutually beneficial information externalities (McCann, 2003). According to McCann (2003) these arguments underlie the ideas of Marshall's explanations of the existence of positive agglomeration externalities in situations of urban industrial clustering. The lesson to be learned by both literatures is that geography still matters in determining economic growth.

### **4.2 Link to social capital**

So what is the link to social capital? Social science has recently recognized that our daily interactions are embedded (Putnam, 2000). An effective norm of so called generalized reciprocity is supported by dense networks of social exchange. In this sense, honesty is encouraged by dense social networks. The following citation (next page) represents this argument:

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*“In a society characterized by dense networks of civic engagement, where most people abide by civic norms, it is easier to spot and punish the occasional ‘bad apple’, so that defection is riskier and less tempting” (Putnam, 1993)*

It is argued that social capital is key to the emergence of an industrial district ((McNaughton, 2000). Repeated ties between firms engender trust that is manifested in the form of the contracts used to organize subsequent alliances (Beugelsdijk and Van Schaik, 2001). The economic effects of trust have already been explained in chapter 3. To summarise; trust within social networks provides options for control through third parties and serves therefore as a substitute for a legal system. This assumption is related to the reduction of transaction cost. Moreover, trust is linked with the facilitation of highly uncertain and complex transactions. It reduces the uncertainty of these kinds of transactions and facilitates the exchange of resources and information that are crucial for high performance but are difficult to value and transfer via market ties. The spillover of knowledge and information between the different actors involved is promoted by the embeddedness in networks (Beugelsdijk and Van Schaik, 2001). Proximity and the shared history, culture and frequent face-to-face interchanges that it brings about, facilitate these networks (Dei Ottati, 1994).

In order for interacting firms to attain the social capital of the geographically embedded communities (networks), they usually need to co-locate within the boundaries of this community (Maskell, 2000). Firms located near to each other have more face-to-face contacts and can easily build up trust, which leads to more personal and thus embedded relationships between firms (Boschma et al. 2002). Co-location is also thought to enhance flows of technical and market information, contributing to both innovation, and the diffusion of skills and competencies (McNaughton, 2000). In this sense, the concept of social capital might thus contribute to current theoretical and empirical work on clustering (Malmberg and Maskell, 1997).

Based on all of this and the theory presented in the chapter 2 and 3 it is possible to formulate a hypothesis that explains the link between geography, trust and economic performance:

*“Spatial proximity facilitates face-to-face contact, which fosters trust and this effects economic growth in a positive way”*

This hypothesis strongly corresponds with the argument presented by Harrison in 1992. He presents a logic that runs from:

*“...proximity to experience to trust to collaboration to enhanced economic growth”*

### **4.3 Spatial proximity: clusters**

Does this mean that all proximity is related to trust? Judging by the evidence presented by McCann and Sheppard (2003), the answer to this question is “No”. It is necessary to isolate the situations that are related to trust. In other words: of what nature are the economic transactions that require face-to-face contact? We will get to the answer of this question at the end of this paragraph. First it is necessary to further explain the different types of industrial clustering that exist. According to McCann and Sheppard (2003) there are three distinct types of industrial clusters. These clusters differ in the nature of the firms in the cluster, and in the nature of their relations and transactions within the cluster (Gordon and McCann, 2000). Two of these have developed from the (neo)-classical traditions of economics: the classic model of pure agglomeration, and the industrial complex model. The third

model of the social network was developed initially outside mainstream economics and owes rather more to sociological perspectives (McCann and Sheppard, 2003), and is primarily associated with the work of Granovetter. Again, the key feature which distinguishes each of these different (ideal) types of spatial clustering is the nature of the relations between the firms within the cluster.

Table 4.1 gives an overview of the characteristics of each of the cluster types, which will be discussed in more detail in the following of this paragraph.

Characteristics	Pure agglomeration	Industrial complex	Social network
<b>Firm size</b>	- atomistic	- Some firms are large	- Variable
<b>Characteristics of relations</b>	- Non-identifiable - Fragmented - Unstable frequent trading	- Identifiable - Stable and frequent trading	- Trust - Loyalty - Joint lobbying - Joint ventures - Non-opportunistic
<b>Membership</b>	- Open	- Closed	- Partially open
<b>Access to cluster</b>	- Rental payments - Location necessary	- Internal investment - location necessary	- History - Experience - Location necessary, but not sufficient
<b>Space outcomes</b>	- Rent appreciation	- No effects on rents	- Partial rental capitalisation
<b>Example of cluster</b>	- Competitive urban economy	- Steel or chemicals production complex	- New industrial areas
<b>Analytical approaches</b>	- Models of pure agglomeration	- Location- production theory	- Social network theory
<b>Notion of space</b>	- Urban	- Local or regional but not urban	- Local or regional but not urban

Table 4.1: Industrial clusters (McCann and Sheppard, 2003)

#### *Type 1: Pure agglomeration*

In this type of industrial clustering, inter-firm relations are inherently transient (McCann and Sheppard, 2003). The firms within this cluster are atomistic, in the sense that they have no individual market power. They will continuously change their relations with other firms and customers in response to market opportunities, thereby leading to intense local competition (McCann and Sheppard, 2003). Because of this, there is no loyalty between the firms, nor are there any long-term relations between them. The external benefits of clustering accrue to all local firms simply by reason of their local presence. Access to this cluster is open and the “cost” of membership of this cluster is the local real estate market rent (McCann and Sheppard, 2003). Consequently the indicator of the cluster’s performance is represented by the growth in these local real estate rents. There are no free riders in this type of clustering. The notion of space is essentially an urban space, because this type of clustering only exists within individual cities (McCann and Sheppard, 2003). This type of spatial clustering is best represented by the notion of clustering underlying models of new economic geography (Fujita et al. 1999; Krugman, 1991).



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### *Type 2: Industrial complex*

The industrial complex is primarily characterised by inter-firm relations that are long-term stable and predictable (McCann and Sheppard, 2003). The firms in the cluster are involved in frequent transaction. This type of clustering is most commonly observed in industries such as steel and chemicals (McCann and Sheppard, 2003). Access to the cluster is severely restricted by both high entry and exit costs. In order to become part of the grouping, component firms within the cluster each undertake significant long term investments, particularly in terms of psychical capital and local real estate (McCann and Sheppard, 2003). The rationale for spatial clustering is that proximity is required primarily in order to minimise inter-firm transport transaction costs. As table 4.1 shows, there are no effects on rent, because the land which has already been purchased by the firms is simply not for sale. The notion of space is local, but not necessarily urban and may even extend across a sub-national regional level (McCann and Sheppard, 2003). In other words, these types of complexes can exist either within or far beyond the boundaries of an individual city and depend crucially on transportation costs.

### *Type 3: Social network*

The social network model argues that mutual trust relations between key decision-making agents in different organizations may be at least as important as decision-making hierarchies within individual firms (McCann and Sheppard, 2003). These trust relations will be demonstrated by a variety of features, such as joint lobbying, joint ventures, informal alliances and reciprocal arrangements regarding trading relationships. The central feature of such trust relations is an absence of opportunism, in that individual firms will not fear reprisal after any reorganisation of inter-firm relations (McCann and Sheppard, 2003).

These trust relations between key decision-makers in different firms are assumed to reduce inter-firm transaction costs. The reason for this is that when such trust-based relations exist, firms do not face the problems of opportunism. Such trust-based relations can therefore partially substitute for the disadvantages associated with geographic peripherality (McCann and Sheppard, 2003). As such, inter-firm cooperative relations may differ significantly from the organisational boundaries associated with individual firms and these relations may be continually reconstructed (McCann and Sheppard, 2003). All of these behavioural features rely on a common culture of mutual trust, the development of which depends largely on a shared history and experience of decision-making agents.

This type of clustering is essentially a-spatial, but from the point of view of geography, it can be argued that spatial proximity will tend to foster such trust relations over a long time-period, thereby leading to a local business environment of confidence, risk-taking and cooperation (McCann and Sheppard, 2003). Spatial proximity is thus necessary, but not sufficient to acquire access to network. In table 4.1 the access to the cluster is classified as partially-open, in the sense that local rental payments will not guarantee access, but they will improve the chances of access. In this social network model space is therefore once again local, as with the industrial complex model, but not necessarily urban, and often extends over a sub-national regional level (McCann and Sheppard, 2003).

The primary geographical manifestation of the social network is the “new industrial areas” model of Scott (McCann and Sheppard, 2003). This model has been used to describe the characteristics and long term growth performance of areas such as the Emilia-Romagna region of Italy, or a lesser extent Silicon Valley in California. Emilia-Romagna has large networks of primarily small firms which are tied together by close personal ties. The clustering model, introduced by Porter, can also be argued to fit into this social network category (McCann, 2003). Although Porter (1990, 1998) assumes that the dominant competitive effects of clustering are mediated by information flows between firms and individuals within the urban sphere. The primary effects of this, is to stimulate local competition by

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increasing the transparency associated with competitive improvements. Such information flows, Porter (1990, 1998) argues, may also extend well beyond the urban scale in situations where trust exists.

In reality all spatial clusters or industrial concentrations will contain characteristics of one or more of these ideal models, although one type will tend to be dominant in each cluster (McCann and Madambi, 2005). In order to understand the advantages to the firm of being located in any particular cluster, it is first necessary to determine which of the types of industrial cluster most accurately reflects the general characteristics and behaviour of the firms in the cluster (McCann and Madambi, 2005). In general, the rationale for industrial clustering is to internalise information transaction costs within the group of clustered firms. It is therefore necessary to consider how the organisational characteristics and objectives of a firm relate to the cost and benefits of the information-spillover characteristics and inter-firm behaviour of the other clustered firms (McCann and Madambi, 2005).

#### **4.4 Information spillovers, inter-firm (learning) behaviour and firm size**

There is some evidence to suggest that beneficial information spillovers may operate in certain locations (McCann and Madambi, 2005). It is, for example, well known that R&D-intensive industries tend to be highly spatially concentrated (Ameida and Kogut, 1997). This spatial concentration has even tended to persist in the face of rising local labour, land and other local input costs (McCann and Madambi, 2005). The involvement of firms in clusters is however not ubiquitous. According to Cantwell and Kosmopoulou (2002) there is evidence that this involvement is sensitive to the nature of the industry structure in which the firm operates. It is therefore necessary to consider the firm's perceptions of the benefits of information spillovers. In particular we must distinguish between information spillovers which result in knowledge inflows and those which result in knowledge outflows, and it is also necessary to distinguish between intentional and unintentional knowledge flows (McCann and Madambi, 2005).

Although it is relatively safe to assume that all firms regard knowledge inflows positively, irrespective of whether they are intentional or not, a firm's perceptions of the benefits of knowledge outflows will depend on the structure of the industry in which the firm competes (McCann and Madambi, 2005). The reason for this is that unintentional knowledge outflows have both a positive and a negative effect on the individual firm. According to Grindley and Teece (1997) the individual effect of an unintentional knowledge outflow on the firm is a leakage of its valuable intellectual capital, which would be perceived negatively by the firm. The potential positive effect of an unintentional outflow is the so-called public-good aspects of knowledge (d'Asprement et al. 1998). This, according to McCann and Madambi (2005) contributes to a virtuous cycle by strengthening the knowledge base of the whole region (cluster) and making it a more attractive location for other knowledge-bearing firms. This in turn, should generate larger future knowledge inflows to all the firms in the group.

In a competitive market structure characterised by a large number of (small) firms, each with a relatively small market share and profits, such firms probably have little to lose from unintentional knowledge outflows and more to gain from knowledge inflows stemming from a strong clustered location (McCann and Madambi, 2005). The *public-good* aspect would appear to dominate here, with the local knowledge outflows being perceived as generally positive both for the firms themselves and also for the local region (Jaffe et al. 1993; Saxenian, 1994). In an oligopolistic industrial market structure firms realise that unintentional knowledge outflows to industry rivals can be costly in terms of lost competitive advantages. In this case, the *private-good* aspect of knowledge is their dominant

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consideration (McCann and Madambi, 2005). The overall effect of the knowledge outflows is here perceived to be negative, because any unintentional information outflows from a firm are more valuable to its competitors than any potential information outflows from these competitors to the firm. Thus, if the clustering of oligopolistic firms appears to jeopardise their proprietary knowledge assets by exposing themselves to the possibility of unintentional outward knowledge spillovers, such firms will decide not to locate in clusters, unless they can find a way of avoiding unintentional knowledge outflows (McCann and Madambi, 2005).

Looking back at the cluster typologies presented in paragraph 4.3, the possibility of unintentional knowledge outflows is associated most obviously with the model of pure agglomeration. Here tacit knowledge can be shared between two parties but, if there is little or no inter-firm loyalty within the system, this knowledge can also be passed on to third parties who are beyond the control of the originator of the information (McCann and Madambi, 2005). Therefore pure agglomerations will create information problems for oligopolistic firms. In the case of a social network, in which non opportunistic relations between the firms are built upon long-standing mutual trust and shared experience, an “immigrant” oligopolistic firm will also benefit little, as these trust systems are primarily based on networks of small firms aiming to help one another (McCann and Madambi, 2005).

The type of clustering which corresponds to the hypothesis formulated in this chapter most obviously is the one of the social network, in the sense that this type of clustering is related to trust and cooperative relations. Industries associated with these “new industrial areas” and the industrial clustering model of Porter, are industries which rely on informal information exchanges, technology spillovers and spatial patterns of joint-lobbying activities (McCann, 2003). As shown in this paragraph small firms are most likely to share knowledge, since they are the type of firms gaining the most from knowledge inflows and they also have relatively little to lose from knowledge outflows. Where larger firms have the resources and opportunities to internalise knowledge, small firms usually do not. Therefore they need to share bits of information and create a pool of public knowledge, which they all can benefit from.

#### **4.5 Conclusion**

In recent years there has been a widespread revival of both economic and public policy interest in the links between geography, trade and economic performance. Based on the literature used for this thesis it can be concluded that geography still matters in determining economic growth.

The link between social capital and (economic) geography is best explained by the theory on industrial districts. At the core of this theory is the argument that firms co-locate to take advantage of external economies. Social capital is then considered to be the key to the emergence of these industrial districts. Interacting firms usually need to co-locate within the boundaries of an industrial district, to attain the social capital of the geographically embedded networks. Firms located near to each other have more face-to-face contacts and can easily build up trust, which leads to more personal and thus embedded relationships between firms. This co-location is also thought to enhance flows of technical and market information, contributing to both innovation, and the diffusion of skills and competencies.

Based on these theoretical speculations it is possible to formulate a hypothesis that links geography with economic performance and social capital. This hypothesis states that spatial proximity facilitates face-to-face contacts. These face-to-face contacts are said to foster trust, which in turn has a positive influence on economic growth.

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But this does not necessarily mean that all proximity is related to trust. After examining different types of industrial clusters, it appears that just one type of clustering strongly coincides with the formulated hypothesis: the social network. This model of clustering argues that mutual trust relations between key decision-making agents in different organisations are important, in the sense that these trust-based relations are absent of opportunistic behaviour. Spatial proximity will tend to foster such trust-relations and is therefore considered a necessity in this type of clustering.

Industries associated with social networks, are industries which rely on informal information exchanges and technology spillovers. It can also be concluded that small firms, each with a relatively small market share and profits, have probably little to lose from unintentional knowledge outflows and more to gain from knowledge inflows stemming from a strong clustered location. These theoretical speculations will be put to the test in the next chapter.

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## Chapter 5: Measurement and analyses

*"There is a long academic tradition that something is not fully understood until it can be measured, and the concept of social capital presents serious problems of definition, let alone measurement" (Temple, 2001)*

### 5.1 Measurement challenges

As already mentioned in this thesis, there are several definitions of social capital. As a consequence of this, these different definitions are also operationalized in very different ways. This has brought into question whether the notion of social capital could operate as a single conceptual entity at all (Baron et al. 2000). If you were to look at other "capitals", physical, financial and human, they appear to command a higher degree of consensus than social capital. Here it is important to realize that concept of social capital is relatively "immature". According to Baron et al. (2000), the rapid proliferation of social capital has allowed a diversity of approaches which may simply indicate an early stage of conceptual development, it may well be that a few more years will see a consensus emerge that will give a more tightly definition.

Aside from this definitional diversity, social capital has also been criticized of being over-versatile. Or as Portes (1998) states:

*"...the point is approaching at which social capital comes to be applied to so many events and in so many different contexts as to lose any distinct meaning"*

In general these theoretical confusions also present some measurement challenges. First of all, where such diversity of definition exists it is inevitable that an equivalent heterogeneity of measurements is used. Second it is important to wonder whether the variables or factors used to measure social capital are actually measuring what they are supposed to do (Baron et al. 2000). In other words: also in the field of measuring social capital the validity of the measures remains an elementary issue. Baron et al. (2000) therefore plea that, since we are at a stage of development of the term, more work needs to be done on the validity of the measures to be used than on analysis.

In spite of this critical academic opinion, there is a strong societal demand for a mode of measurement of social capital. At the moment, too little is known about social capital, its functions and the impact on economic growth to formulate clear policy implications (Beugelsdijk and Van Schaik, 2001). From a policy point of view it is therefore important to find empirical evidence for the role of social capital in regional economic development (Beugelsdijk and Van Schaik, 2001). Research on the relationship between social capital and regional economic development in the EU may, for example, have consequences for the allocation of the Structural Funds.

### 5.2 Possible modes of measurement

Over the last decade several promising ways of measuring (elements) of social capital have been developed: game experiments that measure actual behaviour, surveys that measure trust and norms, and surveys that measure the density of voluntary organisations (Mosch, 2004). All methods have

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their particular advantages and disadvantages, some of which are already mentioned in chapter 3. Game experiments, such as prisoners' dilemma games, trust games and collective action games, provide direct answers to the questions to what extent people tend to cooperate, tend to place trust and tend to be trustworthy and reciprocating. The advantage of this method is that people exhibit their "revealed preferences" and cannot hide behind socially accepted "say-behaviour" (Mosch, 2004). The big disadvantage is that it takes a lot of time and money per respondent, which forms a serious obstruction for doing these experiments on a world-wide scale with substantial numbers of local respondents per region (Mosch, 2004).

The second way of measuring is asking people about their trust, norms and cooperative behaviour. The advantages and disadvantages of this method are inverse of those of the game experiments. Here it is relatively cheap to question many people on a wide scale, but there may be a discrepancy between the things people say they do and their actual behaviour. People are inclined to give socially accepted answers or have problems in adequately imagining their reaction when the proposed situation occurs (Mosch, 2004). Besides this it is possible that the same survey question may be interpreted differently, even by the same respondent at different moments.

Contrary to the two measures of the moral social capital elements above, the third mode of measurement refers to the structural component of social capital (Mosch, 2004). This method focuses on the number of organisations of which a person is a member. This can be easily measured by asking people about their memberships. According to Mosch (2004) this should lead to one "objective" number, because there is hardly room for (culturally based) misinterpretations and because there are no incentives for respondents to lie since it does not involve a socially loaded question. Possible disadvantages of this mode measurement could be that some memberships are secret (membership of illegal organisations) or unclear (are you a donor or full-fledged member of an organisation like Greenpeace when you pay 10 euro per year?). An even more important problem is that the intensity of membership varies between different organisations (Mosch, 2004). According to Putnam (2000) high intensive memberships with much face-to-face contact have more beneficial effects on network formation and trust creation than low intensive "send a check" memberships (see also chapter 2, paragraph 2.3.2).

### 5.3 Measuring social capital

In this thesis a measurement is used which is based on data of the World Values Survey (WVS). The World Values Survey is a worldwide investigation of socio-cultural and political change. It is conducted by a global network of social scientists that have carried out surveys of representative national samples of the populations of over 80 societies in all six inhabited continents. A total of four waves of surveys have been carried since 1981 allowing accurate comparative analysis. The fourth wave was carried out jointly by the WVS and EVS (European Values Survey) groups in 1999-2001. From this fourth wave of surveys, data is collected concerning the Netherlands. For additional information on the WVS and EVS I would like to refer to Appendix A.

In order to test whether or not social capital influences regional economic growth of the Netherlands, the twelve provinces are investigated. The advantage of studying provinces is the number of observations. Instead of just one country, 12 "regions" are studied. Most important, however, is the fact that by examining *national* cultures, 'we risk losing track of the enormous diversity found within many of the major nations of the world' (Smith and Bond, 1998). By studying regions and regional differences this risk is limited (Beugelsdijk and Van Schaik, 2001).

Since the Netherlands is a relatively small country the risk of losing track of regional diversity is probably not as high as in many of the larger nations, but it remains interesting to see whether or not differences exist between these small regions. In table 5.1 an overview is given of the number of interviews conducted per region.

Regions	Frequency	Percent	Population share
Noord-Holland	206	20,5	15,9
Zuid-Holland	212	21,1	21,4
Utrecht	34	3,4	7,0
Zeeland	23	2,3	2,3
Noord-Brabant	151	15,1	14,8
Limburg	34	3,4	7,2
Gelderland	145	14,5	12,1
Overijssel	76	7,6	6,8
Flevoland	17	1,7	2,0
Friesland	32	3,2	3,9
Drenthe	31	3,1	3,0
Groningen	37	3,7	3,5
No answer	5	0,5	100,0
Total	1003	100	100,0

Table 5.1: Regions where the interview was conducted (data withdrawn from WVS 99-00 and CBS, 2006)

Looking at table 5.1 it becomes clear that in some regions more interviews were conducted than in others. In order to judge whether some regions are over- or underrepresented, these figures are compared to the national population share (column 3). It is now possible to see that the region of Noord-Holland is overrepresented and that the regions of Utrecht and Limburg are underrepresented in this survey. Since the measurements conducted in this thesis are for illustrational purposes only, this is not very severe, but still something to keep in mind during the analysis of the measurements.

In this thesis the chi-square test will be used to examine the WVS data. The statistical procedure is based on comparing the observed count in each of the cells to the expected count. The expected count is simply the number of cases you would expect to find in a cell if the null hypothesis is true. By doing this it is possible to examine whether some variables are interdependent (i.e. related). The power of this test depends not only on the size of discrepancy from the null hypothesis but also on the sample size. Looking at table 5.1 it becomes clear that for the region "Flevoland" the sample size (17) of the *observed* values is too small ( $N > 30$ ). This could implicate that it is not possible to reject the null hypothesis even when it is false. What is necessary to keep in mind here is that the *expected* values of all regions, and especially Flevoland, must be at least 5 in 80% of the cells in the cross table.

### 5.3.1 Indicators of social capital: trust and membership densities

The data in de World Values Survey makes it possible to measure social capital in two ways: by measuring trust and by measuring the density of voluntary memberships. This is a combination of two measurement techniques mentioned in paragraph 5.2. This mode of measurement also corresponds most closely with the definition of social capital presented by Putnam, in which social capital consists of certain elements such as trust and networks.

In order to measure trust a survey question is used that asks: “Generally speaking, would you say that most people can be trusted, or that you can’t be too careful in dealing with people?” If you look at the responses given in the Netherlands you can see that the majority of the respondents argue that most people can be trusted (see also table 5.2).

Regions	“Most people can be trusted”	Percent of total per region
Noord-Holland	130	63,7
Zuid-Holland	129	60,8
Utrecht	28	82,4
Zeeland	12	52,2
Noord-Brabant	77	51,0
Limburg	16	48,5
Gelderland	88	61,5
Overijssel	50	65,8
Flevoland	10	62,5
Friesland	15	46,9
Drenthe	18	58,1
Groningen	24	64,9
Total	597	60,2

Table 5.2: Social capital: trust (data withdrawn from WVS 99-00)

Only in Limburg and Friesland (a small) majority of the people argue that you can’t be too careful in dealing with other people. This variation in responses might arise for numerous reasons such as: differences in beliefs about the trustworthiness of a common set of people; differences in interpretation of who comprises “most people;” differences in interpretation of what it means to be able to trust someone; or differences in the ability to elicit trustworthy behaviour from other people (Glaeser et al. 2000a). Variation may also arise because some respondents are not willing to answer truthfully when asked such a question on a survey.

Next to trust, networks are an important element (and therefore indicator) of social capital. Joining a social network may be one of the most common forms of social capital investments. An example of social network is an organisation. In the World Values Survey the respondents are asked to state whether or not they belong to several types of organisations. It is important to realise that the World Values Survey does not record the number of memberships per respondent, but rather the number of *types* of organisations to which a respondent belongs. Thus an individual who is a member of a church organisation and a human rights organisation would have a membership value of 2. A person who is a member of 2 sports related organisation has a membership value of 1. Although this counting scheme is undesirable it is also unavoidable.

In total 3104 memberships are recorded (see also column 2 in table 5.3). The distribution of the number of memberships per type of organisation and per region can be found in appendix B. It is probably not surprising that most memberships (511) can be found in the category sports or recreation, since this is a very common form of leisure in the Netherlands. Least popular are peace movement organisations with a total of memberships of 28. Although table 5.3 is very interesting and reveals the types of organisations most popular in the Netherlands, it doesn’t tell you the number of organisations of which a person is a member.



Type of organisations	Membership	Unpaid work
Social welfare	216	92
Church organisation	346	114
Cultural activities	453	170
Labour unions	237	22
Political parties	93	26
Local political	69	39
Human rights	245	39
Conservation, environment, ecology, animals	452	25
Professional associations	175	37
Youth work	60	42
Sports or recreation	511	162
Women's group	41	21
Peace movement	28	6
Health	85	70
Other groups	93	63
Total	3104	928

Table 5.3: Membership (passive and active) per type of organisation (data withdrawn from the WVS 99-00)

The distribution of the number of memberships per respondent is therefore shown in table 5.4. The mean membership value is 3,09 and the standard deviation 2,05. Approximately ninety-two percent of all respondents stated to be a member of at least one type of organisation

Number of memberships	Frequency	Percent	Cumulative percent
0	76	7,6	7,6
1	143	14,3	21,8
2	220	21,9	43,8
3	191	19,0	62,8
4	159	15,9	78,7
5	100	10,0	88,6
6	56	5,6	94,2
7	20	2,0	96,2
8	24	2,4	98,6
9	3	0,3	98,9
10	5	0,5	99,4
11	5	0,5	99,9
12	1	0,1	100,0
Total	1003 respondents	100,0	

Table 5.4: Distribution of passive memberships (data withdrawn from the WVS 99-00)

The data presented so far still doesn't tell us something about the intensity of membership. The intensity of membership varies between different organisations. As already mentioned before, intensive organisations with much face-to-face contacts have more beneficial effects on network formation and trust creation than so-called low intensive "tertiary organisations". It is possible to look at the intensity in two ways. First we can look at the amount of unpaid work reported per type of organisation. Doing unpaid voluntary work for an organisation implies active membership. Belonging

to an organisation, i.e. without doing any voluntary work consequently implies passive membership. In column 3 of table 5.3 you can find the reported amount of unpaid work. Looking at table 5.3 you can see that of the total of 3104 memberships only 928 are active memberships. The distribution of “active memberships” (table 5.5) reveals that approximately half of the respondents is an active member of an organisation (approximately 49%). The mean membership value is now 0,93 and the standard deviation 1,3.

Number of active memberships	Frequency	Percent	Cumulative percent
0	510	50,8	50,8
1	256	25,5	76,4
2	136	13,6	89,9
3	53	5,3	95,2
4	19	1,9	97,1
5	19	1,9	99,0
6	5	0,5	99,5
7	3	0,3	99,8
8	1	0,1	99,9
11	1	0,1	100,0
Total	1003 respondents	100,0	

Table 5.5: Distribution of active memberships (i.e. unpaid work) (data withdrawn from the WVS 99-00)

A more common way of looking at the intensity of membership between different types of organisation is to categorize them into so-called “Putnam groups” and “Olson groups”. According to Putnam social networks (among whom organisations) generate reciprocity and mutual trust. These norms of reciprocity and trustworthiness emerge between members of a network as a result of frequent face-to-face contact and working for a common goal. However, according to Olson all associations must be seen as “special interests groups”, who try to promote their special interest by lobbying at the government to install new laws that protect their interest, but also worsen the interests of their antagonists (see also paragraph 2.3.2).

Following the way Knack and Keefer (1997) differentiated between “Olsian” and “Putnam-esque” groups it is possible to identify those groups most likely to involve social interaction that can build trust and cooperative habits. These groups are: religious or church organisations; organisations concerned with education, arts, music or cultural activities; and youth work organisations. Labour unions, political parties and professional associations are deemed most representative of special interest groups. The total membership in these three “Putnam” categories is 645, and the total membership in the “Olson groups” is 391. This means that of all respondents approximately 64% is a member of at least one of the “Putnam-esque” groups and 39% is a member of at least one of the “Olsian” groups. The mean membership value is respectively 0,86 and 0,50. Within these, 278 respondents claim to be a member of at least one “Putnam-esque” group as well as a member of at least one “Olsian” group. In other words: 43% of the Putnam groupmembers is also a member of at least one Olsian group, and 71% of the Olson groupmembers is also a member of at least one Putnam-esque groups.

For an indication of how associational activity influences trusting behaviour, the general relationship between the two is depicted in table 5.6. For all types of organisations the proportions answering “most people can be trusted” to the trust question are related to their state of membership: active, passive or no membership. Following Putnam’s thought there should be a positive relationship

between membership and trust. This means that members of associations have a higher tendency to trust than non members, and active members are more trusting than passive members.

Type of organisation	Active	Passive	Don't belong
Social welfare	52,7	54,4	61,6
Church organisation	57,1	60,6	59,8
Cultural activities	67,3	66,2	55,0
Labour unions	81,8	63,3	59,1
Political parties	57,7	58,1	60,3
Local political	64,1	61,8	60,0
Human rights	64,1	73,0	55,9
Conservation, environment, ecology, animals	68,0	66,4	54,9
Professional associations	70,2	78,3	56,2
Youth work	69,0	71,7	59,3
Sports or recreation	74,4	66,8	53,2
Women's group	57,1	63,4	59,9
Peace movement	66,7	78,6	59,5
Health	52,9	54,1	60,6
Other groups	61,9	63,4	59,7

Table 5.6: Proportion of respondents answering "most people can be trusted" to the trust question, sorted by associational activity (data withdrawn from the WVS 99-00)

Putnam's thought holds up for only 5 types of organisations: organisations occupied with cultural activities, labour unions, local political parties, organisations concerned with conservation, environment, ecology and animal and lastly sports or recreation organisations. This outcome is somewhat surprising since some of these types of organisations can be considered special interest groups. Labour unions for example are perceived to be a typical example of an "Olsonian" group. Here we would expect members to have a lower tendency to trust than non-members. This Olsonian mechanism does seem to be strong when we look at the differences between active and passive members. The tendency to trust is lower for active members than passive members in ten out of fifteen organisations. Its tendency to trust is even lower than that of non members with regard to social welfare organisations, church organisations, women's groups and organisations concerned with health.

These simple frequency findings are intriguing enough to test them statistically with use of the chi-square test. The results of the chi-square test need to be below a percentage of 5, in order for the two variables to be significantly related. The results more or less resemble those found with the frequency table. For six types of organisations passive membership is statistically significant with trust: organisations occupied with cultural activities, human rights organisations, organisations concerned with the environment, professional associations, sports and the peace movement. For only three types of organisations active membership is statistically significant with trust: organisations occupied with cultural activities, labour unions and sports. Looking at the intensity of memberships the chi-square test shows that the total number of passive memberships per respondent is statistically related to the variable trust. The likelihood of these two variables to not be dependent on each other is less than 0,05%. The total number of active memberships is not significantly related to trust. Surprisingly the Olson groups are even more significant related to trust than the Putnam groups are (see also appendix C for results). This corroborates the ideas about the Olsonian perverse effects of membership in Olson

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types of organisations. Whether this has implications for the relation of social capital with the economic performance of the regions will have to be determined in the next paragraph.

### 5.3.2 Social capital and economic growth

As determinant of economic growth the Gross Domestic Product (GDP) is used. The GDP of a country is defined as the market value of all final goods and services produced within a country in a given period of time. The GDP is a common used indicator for economic growth. Since there was no data available on the GDP rates before 1995, the economic growth per region between 1995 and 1999 is measured. The region's GDP is then compared to the national GDP in order to determine whether a region has experienced an average growth or not (see appendix D). Next to the GDP, the GDP per capita is also determined. GDP per capita is often used as an indicator of standard of living in an economy. The reason why the GDP per capita is also used as an indicator of economic growth is that some regions seem to have experienced an enormous growth, but are still experiencing a relatively low standard of living. An example of this is the region of Flevoland (see appendix C). These two indicators of economic performance are then tested against the indicators of social capital (i.e. trust and organisational memberships).

The first step is to test the dependency between the variables "trust" and "economic growth". Against expectations trust is not significant related with economic growth. The chance of independency between the GDP and trust is namely 37,7%. The chance of independency is slightly smaller for the GDP per capita, namely 27,4%, but still not significant.

The second step is to measure the level of dependency between organisation memberships and economic growth. As shown in paragraph 5.3.1 there are several ways to do this. Although there is data available on the total number of memberships per organisation, this thesis will restrain itself to the data on the total number of memberships per respondent. The reason for this being that this resembles Putnam's definition of organisational density most. He believed the density of voluntary organisations was best measured by looking at the number of organisations a person in a society is a member (Mosch, 2004). Economic growth is first tested against the total number of (passive) memberships per respondent. The total number of memberships per respondent is categorized into three groups:

- No memberships,
- 1-3 memberships
- More than 3 memberships.

Since the mean membership value is 3,09 the border has been placed on 3. It is necessary to categorize the number of memberships in order for the chi-square test to be valid. The chance of the variables of being independent is 13%. Although this is a small chance, it is not significant. For the GDP per capita the chance of independency is 78%. This means that it is highly unlikely for the two variables to be related to each other. Economic growth is then tested against the total number of active memberships. The total number of active memberships is categorized in the same manner as described above. The mean membership value here is 0,93, so the border has been placed on 1. The results of the chi-square test are now a 65,4% chance of independency for the GDP and a 63% chance of independency for the GDP per capita. Based on these results it is highly unlikely that active membership is related to economic growth.

So far the Putnam story doesn't seem to hold up very strong. Group membership is not significant related to economic growth. An obvious possible explanation for this result is that harmful effects of groups as rent-seeking organizations theorized by Olson are offsetting any positive effects positioned by Putnam (Knack and Keefer, 1997). Economic growth is therefore tested against the Putnam groups mentioned in the previous paragraph. The chi-square test now reveals that there is a chance of 2,5% of the two variables being independent. The Putnam groups are thus significant related to economic growth (GDP). The Olson groups are also significant related to economic growth. However, the chi-square test does not tell us whether these relationships are positive or negative. The GDP per capita variable is not related to either the Putnam groups or the Olson groups.

Besides the GDP there are other important factors that influence economic growth. One of these factors is education. For this reason the level of education is also tested against all the social capital variables. The outcomes of the tests so far are summed up in table 5.7. The significant relationships are starred with an \*.

	Economic Growth (GDP)	Economic growth (GDP per capita)	Education
Trust	0,377	0,274	0,000*
Total number of memberships per respondent	0,130	0,780	0,000*
Total number of active memberships per respondent	0,654	0,630	0,003*
Putnam groups	0,025*	0,518	0,000*
Olson groups	0,011*	0,555	0,000*

Table 5.7: Results of chi-square test: economic growth/ education and social capital (data used of the WVS 99-00 and CBS)

All of the results show that education is significantly related to social capital. It is even highly unlikely that there is no dependency between the different social capital variables and the education variable. With use of another dataset, Dekker et al. (2003) reach the same conclusion that trust appears to be strongly related to the level of education. According to Glaeser et al. (2000a) the positive effect of education on trust might occur because more educated people associate with other more educated people who are, for some reason, more trustworthy. Alternatively, education might create individual social capital by raising social skills or because high status increases the ability to reward and punish others (Glaeser et al. 2000a).

From a policy point of view these findings shed a new light on the social capital debate. The findings support the claim of Dekker et al. (2003) that "policymakers who care about the loss of social trust and political involvement may better keep focused on their tiresome efforts to improve educational changes than simply join the call for community and the revival of associational life".

### 5.3.3 Social capital and economic geography

In this paragraph attempts will be made to investigate the possible relationships between spatial proximity and social capital. The relationship between spatial proximity and social connections has already been investigated in 1999 by Glaeser and Sacerdote. They found that residents of big cities and individuals who live in apartment buildings are more likely to socialize with their neighbours

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(Glaeser and Sacerdote, 1999). This seems to prove the importance of physical distances in driving social connections. In the book "Bowling alone" Putnam provides evidence that urban sprawl is associated with less social capital formation. He finds that each additional ten minutes in daily commuting time cuts involvement in community affairs by ten percent (Putnam, 2000).

A simple way to investigate the relationship between spatial proximity and social capital is to consider all regions as separate spatial clusters. These "clusters" can then be tested against the indicators of social capital. The results of the chi-square test shows that the variable "region" is significantly related to trust (see table 5,8). These two variables are thus interdependent of each other. To make sure the chi-square tests are valid, some of the other social capital variables needed to be recoded. This was the case with the Putnam and Olson groups. Instead of three categories, there are now two: "no membership" and "a membership of at least one". After this it was possible to find out that the variable "region" is significantly related to memberships in "Putnam-esque organisations". Now it is also possible to conclude that geography seems to matter (to an extent) when it comes to social capital and economic growth. To investigate this link further the variable "region" is also tested against the economic growth variables. The outcome of these tests confirms that the variables "region" and "economic growth" are statistically related.

In chapter 4 it has already been stated that not all spatial proximity is related to trust. It is therefore necessary to focus on the type of clustering most probable to have a positive effect on social capital. Judging by the theory presented in chapter 4, social networks are most likely to influence social capital in a positive way. Industries associated with social networks are industries which rely on informal information exchanges, technology spillovers and spatial patterns of joint-lobbying activities (McCann, 2003). As shown in chapter 4 small firms are most likely to share knowledge, since they are the type of firms gaining the most from knowledge inflows and they also have relatively little to lose from knowledge outflows.

The data of the WVS does not contain any information about phenomena as information exchanges and technology spillovers. The data of the WVS does contain information about the number of people working for the same firm per respondent. This could be considered an indicator of firm size. According to the classification used by the CBS, a firm with less than 10 employees is considered a small firm; a middle sized firm has up to 100 employees and a large firm over 100 employees (CBS, 2006). This information is used to measure the relationship of firm size with trust and organisational density.

The results of the chi-square test show that there is no dependency between the variable "firm size" and any of the social capital variables. Even after several recoding sessions the variable "firm size" remained independent from the social capital variables. This is a disappointing outcome, but it does not necessarily prove that social networks are not related to social capital. It could also mean that firm size is simply not a good indicator of social networks. In other words: the characteristics of social networks might not be accurately measured by looking at the firm size. In table 5.8 (next page) all results are summed up.

	Region	Firm size
Trust	0,048*	0,226
Total number of memberships per respondent	0,087	No valid results
Total number of active memberships per respondent	0,252	0,131
Putnam groups (recoded)	0,009*	0,623
Olson groups (recoded)	0,512	0,185
Economic growth (GDP)	0,000*	No valid results
Economic growth (GDP per capita)	0,000*	0,624

Table 5.8: Results of chi-square test: region/firm size and social capital (data used of the WVS 99-00 and CBS)

Other, perhaps better, indicators of social networks are loyalty, history and the level of embeddedness. Unfortunately, such sort of information can not be found in the existing WVS data and would therefore require a secondary research and data collection. When conducting such a research several things have to be kept in mind. First, embeddedness is hard to measure empirically. This is partly due to the various levels embeddedness may appear. Second, the effects of embeddedness are not straightforward. For example, embeddedness can only enhance (economic) performance when it enables access to appropriate resources (McNaughton, 2000). When a firm is located in a region that is critically short of an important factor, or is populated by non-dynamic firms (that are weak in terms of their own internationalisation) local networking will not in itself overcome these limitations (McNaughton, 2000). Much of the literature on embeddedness, just like the literature on social capital, lacks clarity owing to the many different interpretations to the term. All of this makes embeddedness a difficult variable to grasp. This view is shared by Boschma et al. (2002) who claim that many analytical problems remain before the impact of embeddedness can be adequately measured.

## 5.4 Conclusion

Looking at the test results of this illustrational research it can be concluded that trust and membership densities (passive and active) are not significantly related to economic growth. Surprisingly, the results show that education *is* significantly related to social capital. These findings shed a new light on the social capital debate. It suggests that it might be better to improve educational changes than invest in associational life.

When incorporating the “spatial variables” the results are inconclusive. The results of the chi-square test show that the variable “region” is significant related to trust and to the membership of Putnam groups. The variable “region” is also tested against the economic growth variables. The outcome of these tests confirms that the variables “region” and “economic growth” are statistically related. Disappointingly there is no dependency between the variable “firm size” and any of the social capital variables.

Little of the evidence presented here is conclusive and much of it is already known. The contribution of this research mainly comes from the consideration of introducing spatial variables into the theoretical work on the underlying mechanisms that create social capital. So far this has not proven to be very successful, but it is in need of further research. At this moment it is not very clear which variables are actually measuring what they are supposed to do. Actually this validity problem applies to almost all social capital variables.

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## Chapter 6: Conclusion

### 6.1 Conclusion

The main objective of this thesis is to clarify the meaning of the concept of social capital in reference to (regional) economic development. In order to investigate the link between social capital and (regional) economic performance, the thesis starts off with a general overview of the theory on social capital. The central idea behind social capital can be summed up in two words: relationships matter. Here networks are perceived to be a valuable asset, in the sense that they provide a basis for social cohesion, because they enable people to cooperate with each other for mutual advantage.

Since there are many different definitions on social capital and they vary widely in scope and meaning, a particular definition is chosen for this thesis. By choosing one definition, namely the definition given by Robert. D. Putnam, the chance of definitional diversity is reduced to a minimum. According to the definitions given by Putnam, social capital consists out of three main elements: networks, trust and norms. This is used as a guideline through the remainder of the thesis.

In reference to economic development, trust and networks are identified as the two key indicators of social capital. There are many assumptions on how trust influences economics. These assumptions are based on the idea that trust can lower transaction costs; that trust helps surmount opportunistic behaviour and that it facilitates norms of reciprocity and cooperation. Regarding the function of networks and its link to economic growth, it is possible to formulate two possible functions. The first speculates that network relations improve the efficiency of society by facilitating coordinated actions. The second focuses on the advantages of being embedded in networks, like increased sources of information, and the obtaining information that is not easily available (spillover effects). Judging by the evidence found by other researchers, it can be concluded that investing in social capital formation is a potentially useful component of better economic development theory and policy.

Yet, when it comes to (economic) geography and its possible link to social capital, less is clear than with respect to economic performance and social capital. Nonetheless it is possible to find some interesting arguments in the literature on industrial districts. At the core of the theory on industrial districts is the argument that firms co-locate to take advantage of external economics. Social capital is considered to be the key to the emergence of industrial districts. This is explained as follows: co-located firms have more face-to-face contacts and can easily build up trust, which leads to more personal and thus embedded relationships between firms. This co-location is also thought to enhance flows of technical and market information, contributing to both innovation, and the diffusion of skills and competencies.

However, based on the literature on industrial clusters it is possible to conclude that not all types of industrial clustering are related to trust. It appears that only the social network coincides with the formulated hypothesis. This model of clustering argues that mutual trust relations between key decision-making agents in different organisations are important, in the sense that these trust-based relations are absent of opportunistic behaviour. Spatial proximity will tend to foster such trust-relations and is therefore considered a necessity in this type of clustering.



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Industries associated with these social networks, are industries which rely on informal information exchanges and technology spillovers. Besides this it appears that small firms are most likely to share knowledge, since they are the type of firms gaining the most from knowledge inflows and they also have relatively little to lose from knowledge outflows.

So far the outcomes of this thesis have a strong theoretical basis. To find out whether they are in compliance with reality, they are put to the test using the chi-square test as testing technique. Looking at these test results it can be concluded that there is no empirical indication that the level of trust in a region is related to the level of economic growth. It is also hard to find a clear relation between network activity and economic growth. Economic growth is significantly related to positive "Putnam" and negative "Olson" networks at the same time. When the relation between associational activity and trust is examined, it turns out that Olson groups are even more significant related to trust than the Putnam groups are. This corroborates the ideas about the Olsonian perverse effects of membership in Olson types of organisations.

The main contribution of this research comes from the consideration of introducing spatial variables into the theoretical work on the underlying mechanisms that create social capital. So far this has not proven to be very successful, and it is in need of further research. The data of the World Values Survey only made it possible to test whether the variables clusters and firm size are related to social capital. The results of the chi-square test show that the cluster variable is significant related to trust and to the memberships of Putnam groups. There is no dependency between the variable "firm size" and any of the social capital variables. This does not necessarily prove that social networks are not related to social capital. It could also indicate that firm size is simply not a good indicator of social networks. Other, perhaps better, indicators of social networks are loyalty, history and the level of embeddedness, but these are impossible to measure with the existing database and would require a secondary research.

Surprisingly, of all the variables tested, education is the only variable which is significantly related to all the social capital variables. This could indicate that, from a policy point of view, it would be more effective for governments to invest in educational changes than to invest in associational life.

In general it can be concluded that research on social capital unveils many problems in the areas of definition, causality, effects and measurement of social capital. This suggests that the concept of social capital is still in the earliest stages of serious empirical research. Nevertheless, the link of social capital with economic performance is seldom disputed. The available evidence suggests that the concept does influence economic development in a positive manner, but it is not clear how. Moreover, scientists are still not confident on how to measure social capital properly and whether the applied social capital variables are actually measuring what they are supposed to do (validity problem).

The concept of social capital needs much more work before the concept has achieved any kind of theoretical maturity. At present, the main contribution of the theory of social capital to science is that it puts an emphasis on relationships and values as significant factors in explaining structures and behaviours.

## **6.2 Reflection**

When I started the research for this thesis, I was overwhelmed by the amount of literature and different views that exist on the topic of social capital. In the beginning of this research a lot of time has been spent reading all of these books and articles, which (in all honesty) didn't make the concept

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of social capital any clearer to me. By finally choosing a particular definition of social capital I could restrain myself to one line of thinking, which made the concept of social capital more comprehensible and also much easier to work with.

The consideration of introducing spatial variables into the theoretical work on the underlying mechanisms that create social capital, has not been as successful as I would have liked it to be. This is partly due to the available data, which didn't allow me to investigate certain variables I would have liked to investigate. During the process of measuring social capital, many hours have been spent behind the computer trying to relate different variables with each other. Much of this work has been in vain, since the test results were simply not valid and therefore didn't even make it into the thesis. Although this is common with an exploratory research, it has been slightly frustrating at times.

The variables that did pass the test are mainly the variables which have been already applied in other researches. Although this made my research more comparable to other researches, it also didn't allow me to find out whether other variables might be better indicators of social capital than the ones most commonly used. A good example of this are the variables used to measure cooperation, i.e. networks. Most commonly, cooperation is measured by looking at the membership densities of different types of organisations. Although I believe this is a good indicator of the existing norms of cooperation on a society level, I have my doubts whether membership densities can also be applied when measuring *economic* cooperation. In my opinion, the relations between different economic actors can not be compared so easily to the relations people generally have in their day-to-day life. People form connections in their day-to-day life because this benefits their own interests, the connections between economic actors are usually formed because they benefit the interests of the firms they are working for. This, according to me, indicates that the relations between economic actors are of a different nature than the general relations between people. Nevertheless this indicator of cooperation is seldom disputed.

Although the concept of social capital is not entirely new to economic geography, I do hope this thesis gives some new insights on the way the concept of social capital can be applied in a more spatial-economic manner.

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