

The social context in economic analysis from a relational and social capital perspective

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1. Introduction

The belonging of economics to the wide social sciences area is generally accepted and assumed by all the scientific community. But the dominant tradition in economic research recognises the importance of social relationships and the social character of economics just like a general principle. Therefore, social links are rarely considered in economic theory¹, where neoclassical production and consumption models do not reflect the social character of the discipline. This situation has important methodological consequences. First, because the analysed individuals are not placed into the social context in which the action occurs. This deficiency is translated to models where there is an attempt to represent reality. Secondly, because the effects of social context and relationships on economic subjects like consumption and production are significant. The adoption of a social perspective means to deny that economic activities constitute pure individual acts, where consumers and firms are just looking for their utility or benefit maximisation.

It is obvious that numerous economic activities are social actions in a *weberian* sense. That is, actors give to their actions a sense affected by other actors' activities or behaviours (Weber, 1922). A particular consumption could be seen under different perspectives by society, depending on the social group. It could generate rejection, if considered taboo, or it could be widely accepted, if considered a cohesion and group identification element. It could even be transformed into a status symbol (demonstration or Veblen effect). All those possible consumer attitudes depend more on the relational characteristics of individuals than on their attributes. They depend on the actor's belonging to a particular social group and on his actual, or intended, position on it. Similarly, producers are also embedded in a

¹ "In classical and neoclassical economics, therefore, the fact that actors may have social relations with one another has been treated, if at all, as a frictional drag that impedes competitive markets" Granovetter (1985, 484).

net of relationships that can be substituting the information channel offered by the market and that can be affecting their decisions.

Therefore, the behaviour of consumers and producers are linked to the conduct of other actors. Social and economic actions are conditioned by spatial and time dimensions, by the attributes of agents and institutions and also by relational characteristics. That last aspect is the focus of this document.

This paper has two objectives. One of them is to demonstrate the necessity of including social elements in the economic analysis. More specifically, the relevance of actors' (families, firms and other institutions) characteristics and of relational structures will be shown in relation to three main social and economic analysis fields: production, consumption and technological progress. The second objective is to indicate specific forms to incorporate the relational information into economic analysis, endowing it with systemic elements. From this approach the concept of social capital has a crucial role.

This paper is structured in following way. First, there is a brief reflection on the individualistic and asocial character of the dominant economic perspective. In this sense, an alternative perspective is offered: the network perspective. While the orthodox view studies individuals and firms from their attributes, the network view considers the relational characteristics and structures as the main focus of its analysis. The consideration of those relational aspects leads to the study of an emergent and increasingly consolidated concept: social capital. That concept, and its capacity to bring near sociology and economics, will be briefly discussed. The use of social capital as a resource, associated to the agents' relational structure, has positive effects on efficiency. The fourth section of this paper is dedicated to the social capital mechanisms that can lead to an increase of efficiency. After the three mentioned main economic fields have been examined – consumption, production and technical progress-, the conclusion that the consideration of social relationships is necessary and possible in all of them is deduced. The necessity of including the social capital factor will be shown from the explanation of its action's mechanisms. Social Network Analysis offers the analytical instruments for this type of research.

2. Towards a Network Perspective of Economics

The dominant economic discourse is derived from the economic theory that follows the neoclassical perspective. This theory is based on a set of restrictive assumptions leading to

an abstraction from reality that allows for the development of mathematical models explaining all economic behaviours. Among the foundations of neoclassical economic theory there is the assumption that economic agents are rational individuals that try to maximise their happiness. As all economic agents can be divided into consumers and producers, the happiness maximisation is expressed in utility terms for the first group and in benefit terms for the second. Moreover, as all individuals are assumed to behave in this way, they decide independently of all other agents, as 'human islands'. In Bourdieu words 'this theory is desocialised and dehistoricised', based on self-interest.

“‘Interest’ or ‘interests’ is one of the most central and controversial concepts in economics and, more generally, in social science and history” (...) “The concept, moreover, still plays a central role in contemporary economics and political economy: the construct of the self-interested, isolated individual who chooses freely and rationally between alternative courses of action after computing their prospective costs and benefits to him or herself, that is, while ignoring costs and benefits to other people and to society at large, underlies much of welfare economics” Hirschman (1989).

Therefore, from this starting point, economic analysis focuses on agents' attributes and not on relationships.² The obviation of social links implicitly denies the social character of economic agents, which at its most micro level are human beings. Reality, however, shows that all economic agents are social actors taking their decisions in a net of social links.

The structure of the social nets where actors are included is crucial to understand their opportunities and restrictions, in accordance with their position on them. Networks and their structures should be studied by analysing the relationships maintained among agents, in contrast to traditional analyses where the focus is on actors' attributes. In this sense, there is the *network perspective* that offers a particular view for the study of any type of agent as a socially related actor. The distinctive character of this methodology is its *structuralist* character, as the focus of analysis is the relationships maintained among the agents under study.³

² A part of economic research has considered, in a very timid form, the existence of agents links. This is the case of firms' reactions functions (Cournot, Bertrand) and game theory (Nash).

³ Although information about attributes is included in some studies applying network analysis, this is done only in a complementary form to enrich the research. The main characteristic of this approach is its relational character.

The *embeddedness* argument, which constitutes one of the main basis in the network perspective, proposed by Granovetter (1985), offers a potential link between sociology and economics for the study of economic behaviour. According to the mentioned author, economic interactions are embedded in a net of social relationships, and explaining them by abstracting them from such a net will lead to a misunderstanding of the analysed phenomenon. A similar idea is in Wilkinson (1983) offering an alternative methodology for the study of economics by necessarily including the economic, social and political perspectives in every research.

What Wilkinson proposes as an alternative methodology has been present from the classics. In the texts of Adam Smith, David Ricardo, John Stuart Mill and Karl Marx is not possible to understand economics without considering, at the same time, the ongoing political, institutional, and philosophical aspects. Nevertheless, at the time in which Wilkinson defended such an alternative methodology, the leading economic paradigm was and is the neoclassical, in which *positivism* is the theoretical perspective prevailing, and therefore it seems necessary to propose that kind of interdisciplinary methodology again.

Considerations about the social context and relationships are not among the neoclassical paradigm concerns. In that sense, we share Uzzi's (1996) opinion making clear that in the application of network analysis to economic studies, "embeddedness refers to the process by which social relations shape economic action in ways that some mainstream economic schemes overlook or misspecify when they assume that social ties affect economic behaviour only minimally or, in some stringent accounts, reduce the efficiency of the price system".

The co-ordination of both disciplines, sociology and economics, maintains the conception of rational action, superimposing on it social and institutional organisations, endogenously or exogenously. Where the rational action concept compatible with the consideration of the social context is bounded rationality, as analysed by Simon (1956, 1966, 1992). Following Granovetter, the concept of man applied in economic analysis is undersocialised, and therefore it forgets the importance of personal relationships and of networks of relationships, that is *embeddedness*, in generating trust, in establishing expectations, and in creating and enforcing norms.

For Coleman (1988), *embeddedness* is an "attempt to introduce into the analysis of economic systems, social organizations and social relations not merely as a structure that

springs into place to fulfill an economic function but as a structure with history and continuity that give it an independent effect on the functioning of economic systems”.

The structure of relationships in which all agents are embedded can be summarised in the concept of *social capital*. This concept has also been defined and measured from *social network analysis*. *Social network analysis*, generally known as the *network perspective* is considered a methodology, even a paradigm,⁴ applicable to several disciplines, offering a set of methods for the systematic study of social structures. From a methodological point of view, the *network perspective* is not *reductionist*, but holistic, as opposed to individualistic, and interdisciplinary. The actors are purposeful, intentional agents, with social and economic motivations, and their actions are influenced by the net of relationships in which they are *embedded*. When this methodology is used for economic studies, there are contributions of economics and sociology in the analyses, and the concept of *embeddedness* allows for the co-ordination between both disciplines. Therefore, the approach and the concepts offered by *network analysis* are available for the study of economic organisations, allowing for the proposal of theories, depending on every particular research, as the *exchange theories*.

Once the concept of bounded rationality is accepted, the *homo economicus* studied by neoclassical economic theory is compatible with the network perspective and with the inclusion of social relationships, as actors are considered rational and acting to achieve goals according to their personal preferences. Nevertheless there are constraints in the structure of the network in which actors are embedded interfering with individual's actions and influencing the probability of achieving some goals.⁵

In general terms, the agents' environment is characterised by a particular structure in which they act according to their preferences, and with capacity to modify it through the effect of

⁴ Some authors referring to it as a paradigm are Nohria (1992), Emirbayer and Goodwin (1994), Degenne and Forsé (1999) and Wasserman and Faust (1999).

⁵ A structural perspective would allow to consider the network structure affecting the economic actors: “The structural perspective is deductively superior to normative action since its use of network models provides a rigorous algebraic representation of system stratification form which hypotheses can be derived. It is descriptively superior to atomistic action since it explicitly takes into account the social context within which actors make evaluations”. Burt (1982), in Degenne and Forsé (1999, p. 11).

interactions among them. In that manner, the network in which agents are embedded is evolving and changing.⁶

Agents and the relationships maintained among them form a *social network*, being a key element of it the position of every agent on it, which shapes its general structure, implying opportunities as well as restrictions for the involved actors. The structure of the network explains the results caused by actions. Moreover, the shape of the network has a major impact on the process of exchange of any kind, in a way in which the structure affects the exchanges and at the same time it is the product of elementary interactions.

According to Wasserman and Faust (1999), the central principles underlying the *network perspective*, in addition to the use of relational concepts, are:

- Actors and their actions are viewed as interdependent rather than independent, autonomous units.
- Relational ties, or linkages, between actors are channels to transfer or for the flow of resources, either material or nonmaterial.
- Network models focusing on individuals view the network structural environment as providing opportunities for or constraints on individual actions.
- Network models conceptualise mainly structural, social, economic, political aspects, as lasting patterns of relations among actors.

Therefore, it can be concluded that the relational structure of the network is a resource emerging from it, available for its exploitation in the benefit of the group. This structural resource is the *social capital*, which is present in every network regardless of its size and scope, as all social relations and social structures facilitate some forms of *social capital*. The analysis of this question is our next objective.

3. About Social Capital: concept, measurement and results.

The concept of social capital is briefly presented in this section as there are several works offering wide reviews of it (Grootaert, 1998; Adler, 2001; Woolcock, 2001, Vargas, 2002; and Grootaert and Van Bastelaer, 2002). Relevant international institutions, like OCDE

⁶ Deeper arguments in this respect can be found in Burt (1982), Leydesdorff (1991), and Degenne and Forsé (1999).

and World Bank, have recognised the importance of social capital, from an economic development perspective, promoting and financing its study.⁷

Putnam is probably the researcher that has extended more the social capital concern offering the most agreed definition. According to Putnam (2001) Social Capital is defined as social networks and the norms of reciprocity associated with them, varying systematically across time and space. In a similar sense, although more synthetic, Woolcock (2001) indicates that Social capital refers to the norms and networks that facilitate collective action, and Adler and Kwon (2000) define Social Capital as “the sum of resources available to an individual or group by virtue of their location in the structure of their more or less durable social relations”. Therefore, its nature or origin is social and structural, in the sense that norms and relational structure in a particular space and context, are the forces supplying the social capital. From an economic perspective it should be pointed out that social capital is the base holding the net of firms (purely mercantile or not) and other institutions, considering the quantity and quality of relationships maintained among them.

Social capital (SC) is, from our point of view, a resource emerging from the relational structure of every socio-economic system, that can promote economic development and which quantity and quality affect regional and national progress. SC is a productive and structural factor conditioning the results, for example in terms of the progress that organisations can achieve. As for human and physical capital, SC is the cause and also the result of economic development. Furthermore, it acts with different intensity depending on the structure of the system, as it emerges from the relations or links maintained among the actors constituting a network.

Then, the social structure can be considered a kind of capital, Social Capital, that can create for certain individuals or groups, holding a certain position in the structure, advantages in pursuing their ends, and therefore better connected actors enjoy higher

⁷ The World Bank launched in 1996 ‘The Initiative on Defining, Monitoring and Measuring Social Capital’ (Social Capital Initiative), generating publications and financing a program of comparative research on local institutions in poor countries (‘The Local Level Institutions Study’). OECD has also promoted Social Capital research, as an example John Helliwell edited *The Contribution of Human and Social Capital to Sustained Economic Growth and Well-Being. International Symposium Report*.

returns⁸. Following Putnam (1993), social capital enhances the benefits of investment in physical and human capital, which are tools and training affecting positively to productivity. In that sense, social capital can be defined as capital, by analogy with those other two capital notions. According to the same author, and others as Coleman (1988), the productivity of Social Capital makes possible the achievement of certain ends that would not be attainable in its absence. Social Capital is seeing at present as a vital factor for economic development at any level, helping to formulate new strategies for development. Relationships are a strategy for development and growth.

Some research studies showing a positive link between social capital and development are Knack and Keefer (1997), using trust as a social capital proxy, Helliwell and Putnam (1995), stressing the higher growth rates of Italian regions with a more developed civic community, and Putnam (1993), showing the positive relationship between social capital and economic success. OECD (2001), La Porta *et al* (1997) and Knack (2001) show the positive link between social capital and education, income equality and investment, all of them development factors.

Moreover, for Coleman (1988), the notion of Social Capital is a way of introducing social structure into the rational action paradigm, and therefore connecting sociology and economics. With rational action, and through Social Capital, each actor has control over certain resources, and interests in certain resources and events.

The SC measuring is still a research challenge, owing to its relatively recent emergence and also to its intrinsic measurement difficulties, much higher than for the other production factors. At least, social network analysis allows to know interaction patterns, and therefore its application is essential in this context.

Therefore, it is necessary to study the network structure of the socio-economic system to measure, in some way, SC. The SC bibliography offers in some cases specific indicators, other authors recommend the structure visualisation through graphs, and in some other occasions it is suggested to link SC with network analysis traditional measures.

According to the first perspective, Krackhardt (1992) and Burt (2000) propose SC measures based on some of the network structure characteristics (size, density, hierarchy,

⁸ “Where you live and whom you know – the social capital you can draw on – helps to define who you are and thus to determine your fate”. Putnam (1993, p. 6).

centrality). In the same way, Burt (2000) shows graphically different structures with diverse SC levels for their comparison with any other network structure. According to his typology the net with more social capital content would have the highest number of links among its actors and strategic links (*structural holes* and *bridges*) with other net members. This situation is also applicable to the case of several groups identified in a wider net. Then, there will be the highest social capital level when each group maintains a dense inside relationship net, and they relate with the other groups through some strategic linked members.

The analysis can start with micro relationships and being amplified to macro levels, or the other way around. When the study focuses on the organisational structure of a firm, its internal cohesion level and the identification of individuals or departments with a strategic role for the transmission of information among groups can be studied. Then, moving towards a macro level, strategic actors linked to other firms and institutions are analysed. In a superior stage systems made of groups of firms, or productive branches taking part in specific value chains, can be considered; then, relationships among themselves and with other systems and external agents (public and private institutions) would be studied.

Nevertheless, one of the most used indicators in research relating social capital and economic growth and development is trust. Trust values have been generally taken from the World Values Survey, obtained through questionnaires in a wide set of countries (Knack and Keefer, 1997 and Whiteley, 2000 among others).

However, SC refers to the relational structure of the agents making the net and therefore, for a complete study of this factor, information would be necessary about any type of relationship taking place, physical or not. The combination of quantitative and qualitative methods is therefore necessary, and the main information source would be questionnaires and interviews to the actors in the net.

Social relationships can be formal or informal, they can refer to trade, trust, norms, information, technology, etc. In the case of economic relationships, it is increasingly accepted that a relational intense and strategic structure (high social capital) helps to the other productive factors (mainly labour, capital, natural resources and business factor) being more efficient and productive. Then, SC is a resource with peculiar characteristics and big potential. Practical examples can be found in the organisational structure of

Japanese firms, Silicon Valley productive system or the industrial districts in the north of Italy.

However, the relevance and functionality of SC are not unanimously accepted. Distinguished economists have expressed hard critics in this respect. As an example, Solow (2000) has emphasized the vagueness and extent of the concept definition. And Arrow (2000) denies the possibility of considering it as a productive factor, asking for the abandoning of the social capital metaphor and the SC term.

From our point of view, most of the critiques and resistances in accepting the SC concept respond to its insufficient theoretical foundation, appearing as vague, complex and hardly manageable. “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). Other critiques refer to the difficulty of assuming the concept by an important number of neoclassical economists, as it does not fit well in their models. However, there are already measurements, like trust values, that have been used for production functions estimations (Whiteley, 2000). In Bourdieu (1998) words “these economists trust models that they almost never have occasion to submit to the test of experimental verification and are led to look down upon the results of the other historical sciences, in which they do not recognise the purity and crystalline transparency of their mathematical games, whose true necessity and profound complexity they are often incapable of understanding”.

The inclusion of social structure into the economic analysis does not merely means to treat a partial aspect of the economic discipline, as the consideration of the SC role questions the microeconomic foundations. The objective of microeconomics is to study the processes of scarce resources assignation to alternative uses. In other terms, microeconomics should be mainly a philosophical research about the resource assignation processes (Gravelle and Rees, 1981). It is particularly interesting the dynamic aspect of the resources assignation task in the microeconomics definition: it is a process. A process in which, as it will be shown in the following section, the relational structure that allows the flows of information and knowledge among agents has a crucial role. Consumers and producers start their resource assignation with choices of factors or goods combinations that probably are not optimal. Then, there are trial and error processes, to find the most efficient solution, that can be substantially shortened by using other agents information and experiences. From

another side, in reality the resources assignment processes are not strictly individual. Consumers and producers adopt their decisions together with other consumers and producers. We could think, for example, in the several occasions in which consumption decisions are not individually adopted, but in a shared and relational form, in the case of decisions affecting to all the members of a family. The situation is similar in the production field. Agents live in society, belong to social groups and therefore make social actions.

Therefore, if the relevance of SC is accepted, we should consider the necessity of reviewing the theoretical foundations of economics, of market functioning as a basic institution in the present economic system, and also of fundamental issues as consumption, production and technical progress.

For this and others reasons it is more urgent and necessary, from our point of view, to find a proper theoretical foundation of SC and to look for mechanisms explaining its operation in the economic system, than to obtain indices for its measurement. Vargas (2002) expresses this idea suggesting less interest for the development of universal indices and more interest for the study of forms of social interactions, the generated externalities, mechanisms working, the relationship with the institutional system and the externalities incidence on efficiency and equity. Obviously, this paper can only suggest partial answers to some of the mentioned questions. Our objective is mainly focused on analysing the link between SC and efficiency in the socio-economic system.

4. Social capital and efficiency

The main objective of this section is to shed light on the study of the channels through which SC acts in economic processes. In order to understand the structure of the whole system and its efficiency, the analysis will go from the micro to the macro level, by studying first the underlying structure of the socio-economic system, and therefore the firms' behaviour. In this sense, it will be discussed how SC constitutes a firm's competitive advantage by affecting positively to its efficiency.

The central question when relating SC and efficiency is to know which is the firm role. In that sense, we share Casson's (1997) suggestive perspective who refers to Coase (1937) indicating that the firm is a co-ordinator. According to Casson "coordination may be defined as an improvement in the allocation of resources" and "the essence of coordination is decision-making. The firm is therefore a specialized decision-making unit." Then, information is a necessary and fundamental input to allow the firm co-ordinating its

resources. For this reason SC gives the firm a competitive advantage as its relational structure gives the firm an earlier and more complete access to ‘external to the firm’ and ‘internal’ information.

According to Burt (2000), SC offers a competitive advantage to the firm through the following mechanisms: ‘protection within closed networks’, ‘brokerage across structural holes’, ‘network contagion’ and ‘prominence’. The two first mechanisms are the best known in providing information flows. The first mechanism (network closure) explains that in dense networks the risk of co-operation is lower and the facilities to access information are higher. Through the ‘structural holes’ mechanism, there are connections with other groups and therefore access to a higher volume of information that is in turn less redundant and attainable in less time. The last two, ‘network contagion’ and ‘prominence’ are, for Burt, mechanisms where the ambiguous and incomplete information supplied by the market is affected, or even substituted, by information offered through the network. Those mechanisms are usually identified with concepts as ‘imitation’ and ‘reputation’.

Those arguments, related to the production field, can also be applied to the positive effect of social capital on the consumption theme, improving information and increasing efficiency. Consumers, from the information obtained from their networks, can improve their purchasing decisions by increasing their individual or collective expenditure utilities. However, the discussion about the relationship between SC and efficiency will be focused on productive systems, going from firms to systems.

For firms, in their attempt to improve the resources assignment, and therefore their co-ordination, there are two important factors to consider: the role of innovation, and the path towards a higher specialisation. Both of them are enhanced through social capital.

Innovation, considered in a broad sense, includes mainly process and product innovation, new types of industrial organisation, opening to new markets, identification of new sources of raw materials, and training and more skilled workers. Even co-ordination can be considered innovation as it implies a change in the organisation of the firm,⁹ that can co-ordinate with researches and scientific experts, households, retailers and other producers. Both, innovation and co-ordination allow for a process towards higher specialisation as they facilitate the firm concentrating in the productive task where it has an advantage. The

adoption of innovation needs for the flow of knowledge and technologies through links among economic actors. Moreover, co-ordination should be necessarily based in an appropriate links structure.

Every economic sector includes firms with entrepreneurs that are able to judge and take decisions to adapt to the continuous changing economic situation. Therefore, there are highly efficient firms adopting innovations, externalising the productive tasks that can be obtained cheaper and more specialised from other firms, and intensifying co-ordination with other institutions. At the same time there are less efficient firms, failing to adjust as they should, without adopting the innovations, maintaining the whole productive process and disliking co-ordination. As a result, there is a continuous process in which dynamic firms co-exist with less efficient firms. The more numerous the efficient firms, the more efficient the system. The aspects in which efficiency depends are based on relationships and therefore on the creation and exploitation of social capital: innovation by its flows, outsourcing by establishing new links with specialised firms, and co-ordination.

The structure of relationships, and therefore SC, should be analysed by considering the particular geographical area where the agents under study are located. Moreover, as history, culture and norms are of high importance and quite different among areas, the study of socio-economic systems should take into account geography and, in some countries more than in others, the analysis should be regional.

The continuous search for higher efficiency is intensified with links that firms maintain with other institutions. A large number of institutions working properly and highly related to regional firms would allow for several benefits derived from positive externalities. Those externalities come from the flows of information, innovations and training, the initiative of joint projects, (therefore firm's co-ordination), and the permanence of a high credibility and trust in the regional system. This is then another part of the social structure (social capital) pushing efficiency and favouring development and growth at a macro level.

Therefore, there is a positive relation between development and the number and type of relationships that firms keep with other firms, government and other institutions in general. This can be inferred when observing the following sequence of events: firms, in their adaptation process, search for higher efficiency levels, more information (cheaper and

⁹ “A co-ordination plan that is novel in some respect qualifies as an innovation”, Casson (1997, p. 73).

better quality) and lower costs, tending to implement strategies that are directed to innovate and to increase their specialisation and co-ordination. The more dynamic firms will incorporate innovations (product, process and intra-firm organisation), externalise tasks (mainly services) and co-ordinate with other firms (mainly at local level through trust), and giving rise to an increase in the number and type (diversifying) of their relationships with other institutions (technology parks, universities, innovation and training centres) in the process. Moreover, firms with that behaviour will look for the most efficient supplier for their productive process. This will push a process of selection distinguishing the supplier firms that also innovate, externalise and co-ordinate, reinforcing the efficiency process and the links increase.

Then, in a logical development process, there is an increase in the number of relations among firms and with other institutions. When the analysis is approached at local or regional level, higher development is more clearly positively related to co-ordination through trust and co-operation. The intensity of this process will be higher the more developed the geographic region where it takes place is. Moreover, it is observed dynamically for every place according to a development and growth process.

The processes towards a more efficient economic system and towards a higher development level, base on co-ordination and on links allowing for flows. The decision-taking of firms are mainly focused on their production process and on their links with providers and customers. Those aspects, production (including providers links) and consumption (including firm-customer links) are analysed from a relational perspective in the following sections, allowing to study more deeply and more extensively some of the ideas already discussed.

5. Production process and Social Capital

Firms are considered in economic theory independent entities that try to achieve their profit maximisation by supplying products obtained from their production processes in the market. Individualism is once more one of the micro foundations in firm behaviour.¹⁰

¹⁰ “The essential features of individualism are, (1) private property in capital, to which are added almost of necessity the rights of bequest and inheritance, thus permitting unlimited transfer and accumulation. (2) competition, a rivalry between individuals in the acquisition of wealth, a struggle for existence in which the fittest survive” Macpherson (1989, p. 149).

Firms, however, are not independent and individual entities, nor in their internal structure neither in their market actions. Firms enjoy a relationship network (social capital) that constitutes a source for their competitive advantages. This social capital is made of:

- An internal relationships net making their organisational structure.
- An external relationships net through their market links with providers, customers and competitors and through their links with other institutions.

Both nets can show different structures. The internal could be hierarchical and formal, or horizontal and focused on informal links. The external could be made of impersonal pure market links, it can be based on personal, collaborative and trust relationships, or a mix of both. Relationships with other institutions could be non existent or highly used. At the same time, it is possible to establish a distinction between markets, hierarchies and a third possibility based on the exploitation of social capital. Markets and hierarchies avoid embeddedness and the advantages derived from social mechanisms. In the first case firms concentrate in the elaboration of a particular good or service and maintain market links with all their factors' providers and business services firms that are necessary for their productive processes. In the case of hierarchies firms prefer to elaborate most of their complete productive processes at home, reducing the market links and having a hierarchical system.

Among all the possibilities, there are some stressing the exploitation of structural links. Jones *et al.* (1997) provide a theory of exchange to explain under which conditions *network governance* has comparative advantages. Following their theory, economic organisations use social mechanisms to co-ordinate, adapt and safeguard exchanges. By doing that, the *network governance* form shows advantages over both hierarchy and market solutions. The theory establishes that the network form of governance is a response to exchange conditions of customised exchanges high in human asset specificity, demand uncertainty, complex task integrating diverse specialists and frequent exchanges. Those exchange conditions drive firms toward structurally embedding their transactions. *Network governance* is understood by the authors as inter-firm co-ordination, characterised by organic or informal social systems, in contrast to bureaucratic structures within firms and formal relationships among them. The theory is proposed for the case of sets of autonomous firms and non-profit agencies, engaged in creating products or services based on implicit and open-ended contracts. The set of organisations taking part in the exchanges

are persistent, working repeatedly with each other over time, and structured according to exchanges that are patterned reflecting a division of labour.

The frequency of exchanges is essential for organisations working according to the above conditions. Frequency facilitates transferring tacit knowledge in customised exchanges, mainly for specialised processes. According to the authors, frequent interactions are what establish the conditions for relational and structural *embeddedness*, what in turn provide the foundations for social mechanisms to adapt, co-ordinate and safeguard exchanges effectively.

However, co-ordination is not enhanced by market mechanisms instead there is a tendency towards de-aggregation and the necessity of co-ordination and integration. Following those circumstances, network governance enhances the rapid dissemination of tacit knowledge across firm boundaries. Moreover, coordination avoids opportunism and therefore reduces transaction costs (Williamson, 1983). According to Ouchi (1980) and Bolton et al (1994) relational contracting and clan, structures that are similar to the network governance of Jones *et al* (1997), are superior organisational systems, as in them opportunism is unlikely and equity can be reached with relatively low transaction costs.¹¹

According to the condition of complex tasks integrating diverse specialists, task complexity requires different specialised inputs to complete a product or service, and therefore there should be behavioural interdependence and the necessity of co-ordinating activities. Simultaneously, time pressure provokes the necessity to reduce lead-time in rapidly changing markets or to reduce costs in highly competitive markets. Therefore, team co-ordination means that diversely skilled members are working simultaneously to produce goods or services in more efficient conditions.

Following the condition of frequent exchanges among parties comprising the network, frequent exchanges and human asset specificity helps to transfer tacit knowledge among parties. Moreover, with reciprocity in frequent exchanges, *embeddedness* is being developed.

¹¹ Relational contracting is an intermediate form of governance between market and vertical integration. It can be also understood as an inter-firm network (Thorelli, 1986) where outsourcing is common with durable trade relationships among firms based on trust. The clan system works under the normative requirements of reciprocity, legitimate authority and common values and beliefs and the informational requirement of tradition.

The combination of all the above conditions promotes structural *embeddedness* among exchange parties through the following social mechanisms: restricted access to exchanges in the network, *macroculture*, collective sanctions and reputation. Those mechanisms are similar to the ones indicated in Burt (2000) and mentioned before: ‘protection within closed networks’, ‘brokerage across structural holes’, ‘network contagion’ and ‘prominence’.

There is another exchange theory affecting firms’ production processes proposed by Degenne and Forsé (1999), discussing a global dynamic theory of exchange, for which there could be positively and negatively connected networks. In the first case, co-ordinated action and group integration depend on co-operation among network members. In the second case, co-ordinated action and group interaction depend on competition. According to the authors, in most real life situations there is a mix of positive and negative exchanges. Moreover, following Coleman (1973), rational behaviour of actors generates an interactive mix of self-interest and control.

The connectivity in exchange networks would make that an exchange occurring through a link would be affected by other exchanges through other links. When there is positive connectivity an exchange increases the probability of other exchanges; in the case of negative connectivity that probability falls. Usually there is collective action in those co-ordinated networks and also uncertainty affecting the links. “If no single actor can achieve the goal alone or award herself the total payoff, the system of actor is defined as a network of mutual dependencies. Each actor and her special interests are dependent on the other actors for achievement” Degenne and Forsé (1999).

In the research made by Perrow (1992) the network perspective is applied to the study of *small firm networks*. The firms in the network compete and interact by sharing information, equipment and personnel, among other things, with one another. In the group there are firms supplying raw materials; other group supplying equipment, energy, and so on; there are business and financial service firms.¹² The number of producers is high and there are distributors and customers, together with an infrastructure surrounding them consisting mainly in local and regional government, trade associations and unions.

¹² Mainly supplying business services, technical training, personnel administration, transport and research and development.

Applying these characteristics, the author asserts that *industrial district* is another term for small firm network. In the defined situation firms can react more quickly and fruitfully to changes in technology and markets. Firms act maximising their individual self-interest, but trust and co-operation coexist with competition, there are economies of scale derived from networks, and there are welfare effects increasing the efficiency of the region and of the industry.

One of the main conclusions obtained from the application of the network perspective to exchanging organisations is the importance of trust relationships. As we are showing at this point, and according to the results obtained through several studies, trust and embedded relations emerge in situations of continued exchanges.

In the case study developed by Krackhardt (1992), relationships maintained by a selected firm are analysed, concluding that informal relationships implying trust are the prevailing ones in situations of crisis or radical change. According to Gulati (1995), through ongoing interaction firms learn about each other and develop trust, therefore inter-firm trust is incrementally built as firms repeatedly interact; therefore, the author proposes prior alliances between firms as a proxy to measure trust.¹³ Moreover, trust is more likely to be built in reduced geographic areas, as it is expected that firms trust domestic partners more than others. When distance among organisations is short, there is more and better information available about firms, and the reputation consequences of opportunistic behaviour is greater in a domestic context. Therefore, the primary control mechanisms governing economic transactions among firms are price, authority and trust (Bradach and Eccless, 1989)¹⁴.

Trust among regional or local firms is better developed in a firms' structure that is not based on hierarchies neither on pure market transactions, but in the exploitation of social capital.

6. Consumption and Social Capital

In the dominant economic theory perspective the consumer is an individual deciding independently of other individuals his expenditure sharing, in order to maximise his utility.

¹³ Nevertheless, the most generally used value of trust is the one published by the World Values Survey.

¹⁴ The author mentions Arrow (1974) asserting that trust is perhaps the most efficient mechanism for governing economic transactions, as it reduces costs.

However, every consumer is *embedded* in a social network and moreover consumption has, usually, a stressed social character owing to:

- i) Consumer actions are conditioned by other individuals activities or perceptions.
- ii) Consumption decisions of some individuals affect to others.
- iii) Consumers belong to social groups, act in a particular context and are affected by habits and influenced by the territory in which they live.

The fact that every consumer is embedded, and therefore affected, by his social network implies that there is a clear link between social capital and consumption decisions. Consumers, as social actors, take most of their consumption decisions considering their social ties, and therefore making use of their social capital. In this section some ideas are presented, about the mechanisms by which this link acts.

Among the intrinsic aspects of SC there are the rules and norms, implicit (custom) or explicit (laws) that consumers adopt and accept when they live and act in society. In that sense, particular consumption acts are forbidden or refused by society (taboo) while others are pushed (imitation behaviours, fashions) or even they can be identified with snobbishness or status (demonstration effect).

At the same time, history has much to say about consumption habits, as societies, with their preferences, habits and international influence, evolve and are affected by their past.

Besides, publicity, upper class behaviours, television and movies increasingly affect society. In that sense, several authors (Barber, 1998) have stressed the global aspect of culture and consumption. For the globalisation phenomenon having sense consumers should be understood as social agents, otherwise it would not have sense, if applying the neoclassical consumer principles.

Moreover, some consumption decisions are taken as a group decision instead of individualistic. Among the clearer example of this situation there is family behaviour. In that sense, decision processes adopted by households can show a diverse complexity and a diverse formalisation degree. Higher cohesion among individuals implies higher collective utility satisfaction, avoiding frequent effective negotiations as the intensity of their relations guarantees fluidity for internal information flows. In that sense, social capital is continuously determining the 'individual' consumption decisions. Therefore, it could be asserted that 'consumption' is more 'neoclassical' the lower the social capital involved in individual decisions.

The consideration of information flows in consumption decisions opens the economic analysis to a new dimension. Theoretically, from the market perspective, consumers should have complete and perfect information. It is generally agreed that this is not the case in real markets, and the problem of incomplete, expensive and asymmetric information is considered a market failure. Then, public intervention is accepted to solve the failure. Social networks, however, supply additional needed information through personal links, and therefore they complement the imperfect or absent market information. The necessary information could come from the market and it can be affected, or even replaced, by the information obtained from the network in which the actor is embedded (Granovetter, 1974). In the case of information affected by relationships, the structure of the actor's social network can facilitate the information flow improving and increasing it. This will allow for a higher probability of maximising the utility at a minimum cost. In the case of replacement of market information, the spacing out from the typical neoclassical consumer is even higher, as the market information can be substituted by the network information, through the already mentioned mechanisms 'network contagion' ('imitation') and 'prominence' ('reputation').

From a strict economic point of view, consumption can be final or intermediate (when used in the production process of other consumption goods). All the arguments discussed above better adapt to the case of final consumption. However, there is another relational aspect that is more influential in the case of intermediate consumption, when customers are other firms, acquiring intermediate goods or services for their productive processes. This aspect refers to the links between producers (providers) and customers (intermediate demand) related to the mechanisms already discussed in the two previous sections. In this case, there is a link between both actors that consist of a purely market formal relationship, but in numerous cases it is not. In some circumstances trust and continuity are key factors taken into account by both parts. In some others, the link is more complex and wide, with customers participating in the production process of their suppliers, transmitting them information, knowledge and advice and taking care of their necessities being covered. The exploitation of this social capital aspect happens to be more effective and usual in highly efficient firms and in more developed areas. Nevertheless, even when consumption is a final act and the consumer an individual (or a family), there are several cases in which the same participant relationship applies. This mainly happens in service markets usually

offering customised services. None of the aspects mentioned above could be taken into account by considering consumers as isolated rational individuals.

7. Technological progress and Social Capital

Technological progress is generally considered the main economic growth factor, as the access to flows of knowledge and innovation is crucial in any socio-economic system. The knowledge flowing in the system can be tacit or explicit and it generates innovations that can flow in an embodied or disembodied form. Both, knowledge and its transformation into innovations, in any of their possible forms, flow and are accessible through the links structure of the social network, that is, through the functioning of social capital. At the same time, relationships in the network can have a proximity or a long distance character, and therefore the network structure conditions the performance of knowledge transfers. Proximity among actors (spatial dimension) is particularly relevant when the transferred knowledge has a tacit character. “Michael Polanyi coined the term tacit knowledge to describe the fact that expert scientists ‘know more than they can tell’” (Gorman, 2002). This kind of knowledge can not be explicitly transferred (in a document) by definition and proximity is necessary to allow for direct contacts and therefore regional analyses will be more appropriate. In the present communication era we could think that Information and Communication Technologies (ICT) could substitute direct contacts, however tacit knowledge, and its relevance for technology transfer and for research made in groups, clearly reveal the territorial dimension as a social relationships space.

Once knowledge is transformed, innovation should be understood in a wide sense, including new or improved productive processes, products and services, new industrial organisations, co-operation strategies and use of links with private or public institutions like innovation and technology centres, technology parks or formation and advising centres.

Any of those types of innovation have a positive impact in progress. All of them will be more effective if there is a high quality social capital structure: information about product and process innovation will flow more effectively; new industrial organisations will be better implemented (see section 5); co-operation strategies will be facilitated; and links with institutions will be possible and more efficient. All those innovations will be more or less effective depending on the relationship structure, on the social capital. The structure of the network, and the position of the actors in the net, offer essential information. The

position of the agents allows obtaining deductions about which agents are strategic in the network by checking if they occupy a central position or a *bridge* position, and this can be linked with the existence of power, prestige, dependency relationships, or even vulnerability. In the case of actors in vulnerable positions, that is, positions in which they depend on one or very few other agents to maintain their relationships in the network, the existence of *social capital* through *structural holes* gives them some possibilities to reduce their vulnerability.

When groups, or actors, are weakly connected, between every two weakly tied networks there is a *structural hole* and there are opportunities for some strategic agents to allow the flow of any exchange among groups or networks. The existence of *structural holes*, and therefore *bridges* and *weak ties*, implies the existence of a potential for some agents as a characteristic of the structure of the network, which is particularly important for the cases of knowledge and innovation. At the same time, the cohesion of the net, with many strong ties and therefore high density implies feasible co-operation and co-ordination among the agents building the network. This is, again, a characteristic of the structure of the network with positive implications from an innovation perspective.

According to Granovetter (1973) it is possible, and useful, to distinguish between *strong and weak ties*. For Granovetter, there are four factors defining the strength of a tie: amount of time, emotional intensity, intimacy, and reciprocal services.¹⁵ The notions of *strong and weak ties* have been applied to any kind of network, even for organisations and institutions. In Gibson (2001) weak ties are understood as spanning relatively heterogeneous segments of society rather than being clan or kinship based. The important issue is that *strong ties* are linking actors belonging to the same group, actors interacting with high frequency. But a *weak tie* will be the one between the member of a group and the member of a different group, that is, the agents linked by a *weak tie* do not belong to the same group, and therefore that link constitutes a *bridge*. *Weak ties*, acting as *bridges*, provide agents with access to information and resources beyond those available in their own social groups, implying non redundant contacts and access to new information, knowledge and innovation.

¹⁵ “The strength of a tie is a (probably linear) combination of the amount of time, the emotional intensity, the intimacy (mutual confiding), and the reciprocal services which characterise the ties”. Granovetter (1973, p. 1310).

When contemporary capitalism is understood as a learning economy (Morgan, 1997), know-how and tacit knowledge are the key intangible and invisible factors for the production processes of any firm and the role of social capital is recognised. Therefore, knowledge, competence, skill, and organisational culture become of great importance, mainly in the case of interrelated firms located in a particular area making a social network.

In Morgan (1997), and following Storper (1991 and 1995), to study knowledge and innovation flows in a regional context is so important because there are two main roots of learning playing a key role: localised input-output relations, and un-traded interdependencies leading to co-ordination. The last one includes, mainly, labour markets, regional conventions, norms and values, and public or semi-public institutions; all of them should be explained in a localised or regional context. For the case of localised input-output relations, they conform a net of firms related by trade flows, and at the same time those flows includes information and innovation flows. Therefore, considering the key character of learning processes in production, it is important to realise that firms are most likely to learn from other firms, specially that ones that are customers, suppliers and competitors, which are related by technical and non technical flows and therefore making a social network.

For Wilkinson (1983), the success of a socio-economic system will depend on its comparative advantages in terms of its economic, technical, political and social organisation. In such a way it would acquire a strong competitive position. The existence of regional socio-economic systems as relational nets, and the better or worse flow of knowledge and innovation on them, can be deeply understood when the importance of trust and co-operation are considered. Those two factors, happening in a particular institutional framework, create a structure of social relations in such a way that in the explanation of a production process it is not possible to talk just about physical and human capital, production process and so on, but social capital appears as another production factor becoming essential for the firms.

8. Conclusions

This paper defends the following thesis: although mainstream economics, characterised by its individualism and de-socialisation, asserts its consideration as a social science, its foundations are out of this field. The fact that economic actors' activities –consumers or

firms- are taking place in particular social and political contexts, embedded in complex nets of relationships, is not a secondary aspect for them. The structure of their social relations, mercantile and personal, constitute a resource that conditions their decision processes and their access to information and knowledge. Consumers and producers adopt their decisions considering other consumers and producers, sometimes in a collective form, using information from the market and from relational networks. Actors live in society, belong to social groups and therefore make social actions.

Information and knowledge constitute fundamental inputs for the decision processes of producers and consumers. Moreover, the transmission of knowledge is the base for research and technology transfer processes. Therefore, the economic relevance of information access, in quantity and quality suitable terms, can be better understood from a relational perspective. From this view, the relevance of SC is stressed, as it constitutes a basic requirement for co-ordination and therefore for production, consumption, and scientific and technological efficiency. From this perspective territorial factors should also be considered, as the geographical context is crucial in explaining differences and in enhancing the potentiality of social capital.

An efficient economic behaviour using social capital enhances growth and development in the geographical area where formal and informal links take place. This conclusion confronts the orthodox one in which agents take their individual and independent decision following self-interest. It is then assumed that when all economic agents act individualistically the best economic result is obtained at a macro level.

The social character of economics can return from the classics according to the growing relevance and interest of SC. In the next years the scientific community could assume the necessity of rejoin society and its institutions to the economic analysis. The emergence of Social Capital will be the glue holding sociology and economics together.

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