

The Theory of Social Capital in a Supply Management Context

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The theory of social capital has gained increasing attention over the years and shifted its focus from sociology to economics. This shift had as consequence that many more policymakers and scholars found interest in the theory and the value created by it. This also resulted in many different assumptions and propositions of the young theory. To oppose this trend and prevent the theory from becoming only a vague concept of what it once were, this paper sheds light on the history of social capital, defines the main model and portrays the development until the current day. Further it assesses in how far the theory influences the area of supply chain management nowadays and its potential for the future. The established correlation between social capital and several functions of supply chain management is published within a table contained in this paper. The aforementioned serves as catalyst and directs future research into the right direction, in order to maintain a progressing and applicable theory.

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Keywords

'Social Capital', 'Supply Chain Management', 'Empirics', 'Criticism', 'Correlation', 'Global Sourcing', 'Contracting', 'Make or buy decision', 'Supplier development'.

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1. SOCIAL CAPITAL A MYTH?

Throughout the years the theory of social capital has increasingly gained attention among scholars across all fields of expertise. Originating from the field of sociology, the theory was recently introduced to economic segments of literature (Portes, 2000, pp. 2-3). Here the performance improvements associated with the accumulation of social capital and the translation of social capital into economic value gains the most attention. Nevertheless the research regarding this field of expertise is still young and not empirically underpinned or validated.

Further the term of social capital is manifested in the everyday language and is used frequently in many different contexts. (Farr, 2004, p. 7) This has been assessed by Portes (2000), who denotes the solely positive focus of social capital on sociable consequences as responsible for the heuristic power of social capital. Additionally the fact that the theory highlights the way in which nonmonetary phenomena are an essential source of power and influence, contributes to its fame (Portes, 2000, p. 2). This has a consequence that the true 'scientific' meaning of the terminus becomes increasingly blurred and less tangible. In cooperation with the alleged fungibility of the theory, core variables and propositions are altered according to the specific context of application. This 'flood of discourse', as Farr (2004) put it, scares empirical scientists and might be detrimental to future progression in the study of social capital. (Farr, 2004, p. 7)

To countervail this negative development and restore a sound and clear literary basis, this paper seeks to give valid definitions of the theory and state the function and applicability of the contained variables. Therefore this paper investigates the devious paths social capital's main scholars took in the preceding decade. This basis will be subject to the assessment of whether the theory of social capital finds application in the economic field, especially in the segment of supply chain management, or if it should have remained in the area of sociology. After clarifying the theory and all its elements, the focus shifts to the future progressivity and potential development of social capital. This part will assess, if the aforementioned questionability of validity of the theory led to stagnation or already degeneration of its stardom. This will be done through a thorough analysis of state-of-the-art empirical literature to narrow down the correlation to specific aspects of purchasing, such as contracting or sourcing strategies. This will deliver in-depth examples of how social capital can be applied and promoted, to guarantee the best result on the organizations behalf. On the other hand this paper also includes a critical assessment of the theory and the empirical approaches many scholars attended to deliver proof of its existence. In the end the reader can follow the development of the theory from its origin to its future perspectives.

2. THE THEORY OF SOCIAL CAPITAL

2.1 The theory of Social Capital Evolved from Multiple Angles

In the recent years social capital has become one of the most known exports from the field of sociology into the colloquial used language. Nevertheless the concept of social capital is not a recent phenomenon. It can be traced back many years to its origin in the times of Marx's distinction between an atomized

class-in-itself and a mobilized effective class-for-itself (Portes, 2000, p. 2). Among others social capital applies neoclassical methods to the explanation of social phenomena that are not conventional parts of the market economy (Smart, 1993, p. 388).

Over the years numerous definitions of the term have been given (Adler & Kwon, 2002, p. 19). Adler and Kwon (2002) developed an overarching definition that summarizes the idea of previous specimens: "Social Capital is the goodwill available to individuals or groups. Its source lies in the structure and content of the actor's social relations. Its effects flow from the information, influence, and solidarity it makes available to the actor." (Adler & Kwon, 2002, p. 23). The theory of social capital is a well discussed theory and three main approaches towards the theory of social capital have evolved and shed light on different aspects of the concept. The first approach was the weak tie theory in the theory of social capital by Granovetter (1973), which puts emphasis on the strength of the social tie when integrated by a person into the process of finding a job. Due to the strong ties within a social group, the received information by one of the member is surely shared quickly within the group or already obsolete because of mutual knowledge within the group. Weak ties are connected outside one's peer group and are known to be rather weak, according to Granovetter (1973) (Lin, 1999, p. 220). Granovetter (1973) resulted in the assumption that strong ties were less efficient when it comes to unique and useful information about job openings than weak ties. Another subsequent approach towards the social capital theory is Burt's (2000) structural holes. Hereby the focus does not lay on characteristics of the individuals direct ties, but on the structure of relations among alters within the individual's social group/network. The theory proposes that it is of advantage to be connected to as much contacts as possible, who are not connected among themselves for an ego within his/her social network. This is because those structural holes or discontinuities of relationships offer the individual benefits, like unique and timely access to information, greater bargaining power and control over resources and outcomes (Lin, 1999, p. 220). On the other hand scholars find problematic, that it raises the problem of free riding, due to sole benefiting from exploiting structural holes, rather than actively engaging into relationships with partners (Walker, Kogut, & Shan, 1997, p. 112). The social resource approach by Lin et al. (1981) underlines the type of resources included in given a network. Within this context a social resource is an alter that possesses a resource considerably important for the fulfilling of the individual's goal. According to their research it is not solely the weakness of the tie which enables such advantageous facts, but the ties increase their reachability with the kind of resource essential for the individual to reach his/her instrumental purpose (Lin, Vaughn, & Ensel, 1981, pp. 1165-1166). The aforementioned approaches coined the theory of social capital and recently this theory has gained increasing interest. Portes (2000) identified two reasons for the sudden interest in the theory of social capital in the 21st century. He believes that the novelty and heuristic power stems from the fact, that the theory puts emphasis on the positive consequences of sociability without referring to the negative features and the placement of these positive consequences in the framework of a broader discussion of capital. With latter the concept elaborates on how such nonmonetary factors are a source of power and influence equivalent to the size of one's bank account or stock holdings. This point of view decreases the distance of sociological and economic perspectives and additionally catches the attention of policy-makers who seek low cost solutions to social problems (Portes, 2000, pp. 2-3).

All in all one can see from the aforementioned approaches that the theory of social capital was not the achievement of one specific scholar but far more a constantly evolving construct with contributions of many.

2.2 Growing Consensus Regarding Assumptions of Social Capital

Until today not much light has been shed on the assumptions concerning the theory of social capital and with that the prerequisites which facilitate this phenomenon on which the creation of such important value depends (Maula, Autio, & Murray, 2003, p. 118). This being the case, several scholars proposed assumptions over the years which formed a vague framework of what is crucial for the existence of social capital. The following section gives a chronological overview of the most dominant assumptions that are still present in today's literature.

Coleman (1988) stated the bare minimum that social capital is defined by and the conditions it has to fulfill. In Coleman's view social capital's coined by its function and cannot be seen as a single entity but many entities, which have all two aligned characteristics in common: the relatedness to aspects of social structure and the facilitation of specific actions among actors (hereby actors can be individual persons or corporate actors, such as organizations) within the structure. (Coleman, 1988, p. 98) Prior to the more specific acknowledgement of purposive organization as actor, Bourdieu (1986) loosely defined actors as "socially instituted and guaranteed by the application of a common name (the name of a family, a class, or a tribe or of a school, a party, etc.)" (Szeman & Kaposy, 2010, p. 21). Next to that social capital is not similar to other forms of capital, such as physical and human capital, in the sense of making achievements possible, which would have been impossible in its absence. Additionally all forms of capital are not completely fungible and therefore are specific to certain activities. In more detail this means that social capital that may be valuable in supporting activities in a certain context may be useless or even harmful for other in another context (Coleman, 1988, p. 98). Nevertheless different social structures can also promote beneficial influences on social capital, where for example it requires less effort to benefit of it, for example in a structure where individuals are self-sufficient and less dependent on each other (Coleman, 1988, p. 102). On the other hand, according to Coleman (1988), social capital also differs from other forms of capital in the sense that it is contained in the structure of relations between and among actors. This means it is not placed within the actors themselves or in random physical aspects of production. Since actors can be of corporate nature as well, Coleman (1988) states the famous example of the sharing of information among corporate actors, in order to allow price-fixing in an industry (Coleman, 1988, p. 98).

Due to the lack of a definite definition of the actual 'capital' itself, Smart (1993) generally proposed that 'capital' is anything that is in the position to be used to influence behaviors of others or in order to aid in achieving the desired goals (Smart, 1993, p. 390).

In the following years the prominent view has emerged that social capital is not exogenously determined but rather through structural conditions endogenously (Maula et al., 2003; NAHAPIET, 1998). These structural conditions portray incentives for the subsequent resource exchange and value creation inherent in the theory of social capital (Maula et al.,

2003, p. 118). Nahapiet and Ghoshal (1998) believe in the existence of three structural dimensions (structural, relational and cognitive (NAHAPIET, 1998, p. 244), while Maula et al. (2003) highlight only two aspects when it comes to the facilitation of social capital (the complementarities between firms and the ownership share) (Maula et al., 2003, p. 118). Furthermore Portes (2000) argues that the primary distinction of the underlying structure of social capital is on motivational level. Portes (2000) distinguishes between consummatory and instrumental motivations which are a crucial prerequisite in order to prosper from the positive effects of social capital (Portes, 2000, p. 7). The latter validates Coleman's (1988) assumption that social capital is strongly context-specific and therefore Nahapiet and Ghoshal (1998), Portes (2000) and Maula et al. (2003) come to different conclusions, since they are active in different fields.

In summary, there is a mixed consensus among scholars over the years, as far as the assumptions for the theory of social capital are concerned but no definite, aligned and specific guidelines one could adhere to.

2.3 An In-depth View of Social Capital

The term of 'social capital' is one of the trendiest terms and is often mentioned by professors and politicians worldwide (Farr, 2004, p. 6). The logical consequence of this iterative use of the term in various contexts and among different individuals is, that the theory stands under many different influences and is subject to many different opinions, which leads in the end to a vague and increasingly challenged construct (Farr, 2004, pp. 6-7). To give more clarity to the basic content of the theory and the process which creates social capital the following describes the theory in more detail and clarifies its aspects.

Bourdieu (1986) and Coleman (1988) laid down the most important characteristic that the 'capital', facilitated and enhanced within the process, is of intangible nature and relative to other forms. As compared to economic capital in peoples bank accounts and human capital inside the individuals heads, social capital is contained within the structure of their relationships (Portes, 2000, p. 7). Within the process of this paper several scholars have been taking into account and the following hypothesis has been chosen to be the most appropriate one: "The more firms can build and leverage social capital in their internal and external relationships, the argument goes, the greater will be the potential value creation benefits that firms can expect as a result." (Maula et al., 2003, p. 118). The underlying variables which come into play here, to make this hypothesis a valid prediction are the network between the different actors ((Burt, 2000, p. 348; Coleman, 1988, p. 96; Onyx & Bullen, 2000, p. 24; R. Putnam, 1993, p. 2), the norms (Coleman, 1988, p. 96; R. Putnam, 1993, p. 2), the reciprocity (R. Putnam, 1993, p. 2) and the issue of trust (Coleman, 1988, p. 117; R. Putnam, 1993, p. 2). As Farr (2004) put it in a more comprehensive way: "In a way both compact and capacious, the concept of social capital boils down to net-works, norms, and trust. Upon inspection, networks prove dense and valuable, norms pervade individual actions and social relations, and trust appears psychologically complex." (Farr, 2004, pp. 8-9) From here onwards the opinions and conceptions of the several authors vary strongly and each brings other concepts to the table (Farr, 2004, p. 9).

Coleman (1988) believed that social capital was an endowment of social structure, not individuals, and emphasized mutual trust. In contradiction to this view Bourdieu (1986), prior to Coleman (1988), laid his focus on “institutionalized relationships and mutual acquaintance and recognition” and found the differentiating between classes more important than trust (Szeman & Kaposy, 2010, p. 21). Again several years earlier Jacobs (1965) exclusively concentrated on networks without any notion of ‘trust’ or ‘norms’ at all (Farr, 2004, p. 9).

To provide the most complete and comprehensive model of social capital the following draws on the findings of Nahapiet and Ghoshal (1998), who formed three dimensions clarifying the theory of social capital (NAHAPIET, 1998, p. 243). Those three dimensions are the structural, relational and cognitive dimension. The two authors base the distinction between the structural and relational dimension on Granovetter’s (1992) discussion of structural or relational embeddedness, which built the groundwork for this distinction. Nahapiet and Ghoshal (1998) therefore refer in the article to the concept of the structural dimension of social capital as the “overall pattern of connections between actors - that is, who you reach and how you reach them.” (NAHAPIET, 1998, p. 244) Among the most important attributes of this dimension are the presence or absence of network ties between actors, network configuration or morphology (NAHAPIET, 1998, p. 244). The relational dimension equals the relational embeddedness of Granovetter (1992) and focuses on the sort of personal relationship people engage, established by a certain history of interactions (NAHAPIET, 1998, p. 244). For this dimension attributes, such as respect or friendship, which have an influence on the personal relation between actors, play a role. Exactly those ongoing relationships let people fulfill motives like sociability, prestige and approval (NAHAPIET, 1998, p. 244). To further clarify this dimension Nahapiet and Ghoshal (1998) provide the example of two employees in equivalent positions within the same network structure who possess different emotional attachments to third members of the network, are likely to also differ in their behavior. The further development could be that on employee may decide to stay in the firm due to his many positive attachments, although no economic benefits are obtained as consequence of his/her decision and the second employee, lacking in such bonds to fellow colleagues, may decide to interrupt such loose bonds to follow his career goals. The aforementioned is an example of how the relational dimension of social capital contains those assets and attributes to create and leverage relationships, for example trustworthiness, norms/sanctions, obligations/expectations and identity/identification (NAHAPIET, 1998, p. 244).

The cognitive dimension refers to resources which provide shared representations, interpretations and systems of meaning among parties. Further these resources are attributes of high value as far as intellectual capital is concerned, including shared language/codes and shared narratives. The scholars added this dimension separated from the others, because they believe that it is the equivalent to assets not yet discussed in the mainstream literature on social capital but not less important. Its attributes are drawn from the strategy domain and stem mainly from the year 1996 and the main authors are Conner and Prahalad (1996), Grant (1996) and Kogut and Zander (1996).

All in all the aforementioned is proof that there is hardly a complete consensus among authors as far as the theory of social capital is concerned. Nevertheless, examples like Maula (2003) and Onyx and Bullen (2000) show, the recent literature portrays

increasing interest in clarifying the means and concept of the theory to create a common manual imbedded in empirical data.

2.4 Social Capital Denoted as Theory

In this section it will be assessed whether the so called ‘theory of social capital’ really qualifies as a theory or if it is misclassified. Vos and Schiele (2014) developed a tool containing several parameters which make it possible to assess exactly the prior problem. Their paper mainly focuses on the sector of supply chain management but the tool itself possesses is fungible and therefore also applicable for the case of the social capital theory, which stems from the field of sociology (Portes, 2000, p. 2). The two scholars developed several parameters which we will apply to the case of the social capital theory, which they summarized in a table. (See Appendix Fig. 1)

The analysis begins with the essential elements of a theory: The *units of analysis* in the social capital theory are the networks of relationships between individuals and groups (Burt, 2000, p. 348; Coleman, 1988, p. 96; Onyx & Bullen, 2000, p. 24; R. Putnam, 1993, p. 2). Along this unit several other variables play a role as for example norms (Coleman, 1988, p. 96; R. Putnam, 1993, p. 2), the reciprocity among actors (R. Putnam, 1993, p. 2) and the issue of trust (Coleman, 1988, p. 117; R. Putnam, 1993, p. 2). The *laws of interaction* in order to benefit from the aggregate resources of social capital, individuals have to be linked to a “durable network of more or less institutionalized relationships of mutual acquaintance and recognition” (Szeman & Kaposy, 2010, p. 21). In other word the import proposition for social capital is the required relation to others, which an individual has to possess, because it is exactly those related actors who are the origin of the advantage (Portes, 2000, p. 7). As far as *limits or boundaries* of the potential theory are concerned, social capital only dictates that there has to be a certain relation to other individuals but it is not connected to only a specific set of relations and therefore different situations allow different outcomes for individuals (Coleman, 1988, p. 101). The same accounts for the determining factor of *system states*, where there are numerous cases in which social capital can be applicable and always depends on the specific context and the organization which are part of the network (Coleman, 1988, p. 101). Coleman (1988) listed several examples of different contexts in which social capital was the source of beneficial outcomes for participants (Coleman, 1988, pp. 98-100). The main *hypothesis and proposition* of social capital is that networks of relationships constitute a valuable resource in the conduct of specific social affairs and grants their participants with “collectively-owned capital, a “credential” which entitles them to credit, in the various sense of the word (Szeman & Kaposy, 2010, p. 21). Building upon this general hypothesis the literature is aligned that the achievements, made possible through the principle of social capital, would not have been approachable or attainable in absence of it or only through a high amount of extra costs (NAHAPIET, 1998, p. 244). This various ways to credit from the valuable resources are often referred to as ‘capital’ by others scholars but it can be “anything that can be used to influence the behaviors of others or to aid in achieving desired goals” (Smart, 1993, p. 390).

All in all, the picture shows a strong theoretical basis but a lack of data and empirical studies within the context of social

capital. The theory begins to become less “slippery” as previously stated by Onyx and Bullen (2000) due to increasing interest in the matter. Apart of this motivation could be, that scholars begin to see the general importance of the theory, because it refers to the basic raw materials of the society we are engaging with every day (Onyx & Bullen, 2000, p. 24) or the economic interest in the theory on the policy makers behalf (Portes, 2000, pp. 2-3).

2.5 The Theory of Social Capital as Pillar of the Society

Despite the still vague nature of the theory of social capital, there is a growing consensus among authors as far as the different aspects of the theory are concerned. The recent definition of Farr (2004) is complete and aligned with earlier research in the field. Therefore Social Capital is “complexly conceptualized as the network of associations, activities, or relations that bind people together as a community via certain norms and psychological capacities, notably trust, which are essential for civil society and productive of future collective action or goods, in the manner of other forms of capital” (Farr, 2004, p. 9). Until no scholar has been found within the literature research of this paper, who could provide a more complete definition of the term.

A topic which has not yet been sufficiently discussed within the means of this paper are the primary sources of social capital.

Portes (2000) analyzed the existing literature concerning the sources of social capital and resulted in the belief, that there are two predominant sources: consummatory and instrumental motivations. Consummatory motivations find their evidence in numerous literary sources. On the basis of an existing relationship between two actors, consummatory motivations could be that people donate to charity organizations and pay their debts in time or obey traffic rules because they feel a certain obligation to behave in that manner. Reason for this is the obedience to internalized norms throughout the individual's life. This means that the holders of social capital are third individuals of a network, which can extend loans with the certainty that there will be a repayment or send their kids to play on the street without concern (Portes, 2000, p. 7). This view is aligned with Coleman's (1988) work, that identifies this source as 'norms and sanctions' (Coleman, 1988, p. 104). Secondly, the principle of bounded solidarity, which leads wealthy donors to support anonymously e.g. schools or hospitals or motivates individuals stemming from a suppressed nationality to voluntarily subscribe to dangerous military defense-activities to protect their people, further fits the view of consummatory motivation. Portes (2000) sees this as consequence of a strong identification with “one's own group, sect or community”, which can portray a “powerful motivational force” (Portes, 2000, p. 8). Again this is a verified assumption according to Coleman (1990), who defines this mechanism as counter movement towards the well-known free-riding of member in collective movements (Portes, 2000, p. 8). The aspect of instrumental motivation portrays the undersocialized view of human nature and sees the “accumulation of obligations from others according to the norm of reciprocity” as primary motivator (Portes, 2000, p. 7). Within this view, donors give privileged access to resources with the expectation of full repayment in the near future. This differs from the above mentioned view in the way, that the schedule of repayment is existent and the transaction in itself is more equal

to a market exchange, than one conducted within the means of social capital (Portes, 2000, p. 7).

Another topic which is rarely covered within the paper and the literature in general are the consequences of social capital. Portes (2000) identified three beneficial effects of social capital. Firstly, he mentions social capital as a source of 'social control' (Portes, 2000, p. 10). This effect is created by tight community networks and is especially beneficial for parents, teachers and police authorities as they are dependent on the maintenance of discipline and a certain level of compliance among individuals and groups within their boundaries of charge. This positive effect stems from bounded solidarity and enforceable trust and results in the redundancy of controls. This topic is dealt with by several authors as Coleman (1992), Hagan (1995) and Zhou and Bankston (1996). Hagan et al. (1995) explain the dominant right wing tendency of German adolescents in eastern Germany, which they believe to be a consequence of the removal of social controls followed by low social capital in correlation with long deprivations seen by East Germans (Hagan, Merckens, & Boehnke, 1995, p. 1049). Putnam (1993) mentions the effect as beneficial in a business context, where social capital, as a form of trust, reduces the appearance of opportunism and therefore diminishes the need for monitoring processes (R. Putnam, 1993, p. 81). Secondly, social capital is a source of 'family support', which is mostly greatest in families where one parent is primary in charge of the education of the offspring (Portes, 2000, p. 11). Especially in Asian families the mother often times stays at home and receives the task of raising the child on a personal and educational level. Coleman (1988) states, that many Asian mothers acquire two versions of school textbooks in order to better prepare her kids homework (Coleman, 1988, p. 110). According to the case study single-parent children benefit less from the social capital within the family, due to more changes of residences and less time, which is invested by their parents in education etc. This view is supported by Parcel and Menaghan (1994), who concluded that the working hours of the parents have a significant influence on the development their child's cognitive abilities and character. This is due to the lack of time and other resources parents can contribute to their child's education (Parcel & Menaghan, 1994, p. 1003).

The third and most dominant effect associated with social capital are 'benefits through extrafamilial networks' (Portes, 2000, p. 12). This takes networks into account, which are external to the family. Anheier et al. (1995) conducted a study with the 'intellectual elite' and the 'periphery' in Cologne, to analyze the network structure and ties between the subjects. Results of the study are aligned with the third effect of social capital by Portes (2000) and state that very strong networks among Cologne's educational elite are present and restrict the access to beneficial resources for individuals in the periphery (Anheier, Gerhards, & Romo, 1995, pp. 892-893). Apart from Anheier et al. (1995) research, Nahapiet and Ghoshal also find that strong norms and the following identification with those, may also be detrimental to the openness to new information and alternative ways of networks. The two scholars determined this as a form of 'collective blindness' (NAHAPIET, 1998, p. 245). On the other hand, Putnam (1993) highlights a more positive side of the third effect and welcomes the increased cooperative behavior and facilitation of new associations besides the family (R. Putnam, 1993, p. 81).

Last but not least Burt (2000) distinguished between two effects of social capital - the 'increased efficiency of actions' and the 'increased efficiency of information diffusion through reduced redundancy'. (Burt, 2000, p. 66)

In summary one can say, that concept, sources and effects of social capital are the aim of an increasing number of articles. Therefore in near future we will have more detailed descriptions of those and empirical data that has a supporting function. One can be sure that the interest in this essential phenomenon of our everyday life will not vanish due to its centrality in understanding of dynamics, innovation and value creation in all sorts of institutions. (NAHAPIET, 1998, p. 245)

2.6 Empirical Findings

2.6.1 Method: Literature Review Approach

To guarantee coherent and valid conclusions concerning the assumptions and propositions made in this paper, a thorough literature selection took place. The primary media through which the search for literature took place were 'Google Scholar', 'Scopus' and the 'Utwente Online Library & Archive'. Hereby the search only focused on articles in the English language but with authors originating from various countries. To find suitable Articles the following keywords have been predominantly used: 'Social Capital', 'Supply Chain Management', 'Empirics', 'Criticism', 'Correlation' and specific termini concerning the decision point, such as 'Global Sourcing' or 'Contracting'. Further was every single piece of literature written by a distinguished author or group of authors and obtained a dominant position in numerous social capital discussions. Important factors of eligible articles were the frequency of citations stemming from the article, reputation of the authors in the field and the originality of the article. Unfortunately some articles were published within the 20th century, but denoted as eligible due to their impact on the development of the theory of social capital. Articles that are based on sound empirical research were treated with preference and emphasized most throughout the process. Topic specific criteria were the relevance of the findings and the external validity associated with the findings of each individual paper for the topic of social capital, due to the strong context-relatedness of several researches.

These criteria ensure that each article is a serious and valuable contribution to the field in general and this specific paper and is ensured to be prominent and coherent within the literature.

2.6.2 Empirical Data Supports Internal Validity of Social Capital

Empirical studies in the field of social capital are mostly very specific and have low external validity, due to their specificity to the context. This paragraph shortly analyzes to what extent the main factors of social capital are verified by empirical research in order to state a solid basis of the empirics on the theory of social capital.

Onyx and Bullen (2000) conducted to provide empirical evidence for the correlation between social capital and the associated factors. Hereby the authors built upon theory concerning social capital developed by Putnam (1993) and Coleman (1988). Most of the factors were previously mentioned within the terms of this paper, to establish a theoretical basis, such as participation in networks, reciprocity, trust, social norms and the commons. (See appendix Fig. 3) To gather data, Onyx and Bullen (2000) conducted a survey containing 68 potential factors and the subjects were 1,200 adults in five Australian communities. Within these communities two rural, two metropolitan and one inner city area were taken into

account (Onyx & Bullen, 2000, p. 23). The findings suggest that social capital more likely to be present in rural communities, compared to urban areas in the periphery of the city. Particularly significant for this finding, were the participation in the local community (factor a), the feelings of trust and safety (factor c) and neighborhood connections (factor d). On the other hand, one cannot conclude that social capital is significantly lower in urbanized areas or the inner city environment, due to good score on factors, like social agency, proactivity in a social context (factor b) and tolerance and diversity (factor f). This leads to the conclusion that there are just different origins for the existence of social capital. In the case of rural areas, a bonding effect is generated by strong mutual support, due to the high local participation in the community life. Nevertheless this support, in contrast to the urban areas, is most likely limited to certain groups within the area and might not be accessible for minority groups or individuals coming from outside the specific community. In this sense, the population of cities possesses a greater level of tolerance and individual initiative (Onyx & Bullen, 2000, pp. 38-39). Additionally, there is strong empirical evidence, that social capital plays a role in immediate personal relationships, rather than distant an formal interactions with institutions or similar. Reasons for this could be the absence of institutions such as governmental institutions in the daily lives and therefore are seen as less important by the people (Onyx & Bullen, 2000, p. 37). Prior to the paper of Onyx and Bullen (2000), Putnam (1995) claimed that the most detrimental instrument, responsible for the decline in social capital in the United States is the television (R. Putnam, 1993, p. 10). The empirical evidence states a moderate relationship between watching television and the decline of social capital. All correlation between the social capital factors and watching television were significant but rather of moderate strength (Onyx & Bullen, 2000, pp. 37-38).

In the end the empirical research of Onyx and Bullen (2000) confirms the conceptual analysis and framework, formerly established by Coleman (1988) and Putnam (1993). Especially the first three factors (participation in networks, trust and social proactivity) are identified to be main elements of social capital, as discussed in previous literature. Particularly Putnam's (1993) factor of reciprocity (R. Putnam, 1993, p. 2) is highly significant in long-term relationships (Onyx & Bullen, 2000, p. 39). According to the data, the effect of social norms (Coleman, 1988, p. 96), does not portray a strongly related factor of social capital but play an important role in correlation with other factors, which are central to social capital as helping a neighbor and trust (Onyx & Bullen, 2000, p. 39). Concluding, the data suggest a moderately positive response to the main factors overall and the majority of the correlations are in favor of most factors. (See appendix Fig.3)

2.6.3 Research Related to Purchasing and Suppliers Still in its Beginnings

The literature concerning strategy and organizational theory focuses on social capital for quite some time, but not much light has been shed on the application of social capital in purchasing (Krause, Handfield, & Tyler, 2007, p. 541). Therefore the following summarizes three recent and dominant articles and states the latest empirical findings and correlations between social theory and purchasing.

Koka and Prescott (2002) belong to the earlier researchers in this specific field and conducted a longitudinal study of strategic alliances by firms within the steel industry sector.

Relating their findings to already established social capital literature on networks, they found three sorts of benefits stemming from the theory of social capital. The three benefits are namely 'information richness', 'information volume' and 'information diversity' (Koka & Prescott, 2002, p. 795) the first benefit relates to the relational capital and the latter two are associated with the structural capital. In application to the subjects of the survey, information richness is dependent on the experience and history of the organizations and the relationship-partners, while the diversity and volume of information depends on the alliance structure, for example the structure established by the relationship (Koka & Prescott, 2002, p. 798). Krause et al. (2007) advance on step further and also include the dimension of cognitive capital in their investigation of existing linkages between supply chain management on supplier involvement and research on social capital. They analyzed to what extent the buying firm's commitment to long-term relationships influences the buying firm's performance improvements, as present in quality, delivery and flexibility issues (Krause et al., 2007, p. 528). In order to identify these linkages, data from buying companies within the U.S. automotive and electronics industry were used and assessed. The data shows approval of the hypothesis, that the performance of the buying company is positively related to buyer commitment and social capital accumulation with key suppliers. Furthermore the scholars argue, that the relationship of structural and relational capital varies with the sort of performance improvement and have unique effects (Krause et al., 2007, p. 528). In more detail, cognitive capital as in shared values and relational capital as in buyer and supplier performance, are essential to buyer performance when it comes to total cost. On the other hand when it comes to the explanation of quality, delivery and flexibility performance, structural capital as in supplier development and cognitive capital as in the form of shared values, were dominant (Krause et al., 2007, p. 540). According to Krause et al. (2007), their paper only provides minor understandings of buyer-supplier relationships and in how far the social capital dimensions relate to the firms performance and research on additional measures, like innovation, is needed. More specifically, they suggest a clarification of communication and knowledge-sharing benefits which stem from relational and structural embeddedness. (Krause et al., 2007, p. 541)

Building on the research of Nahapiet and Ghoshal (1998) and Krause et al. (2007), Lawson et al (2008) emphasize the distinction between relational capital, resulting from relational embeddedness, and structural capital, resulting from structural embeddedness, and empirically test the effects of both on buyer performance improvement in the context of strategic relationships with key suppliers. (Lawson, Tyler, & Cousins, 2008, p. 446) The paper investigates the key driver of value creation within the process of buyer-supplier relationships, which is the leverage of social capital. Although their research is based on the aforementioned authors, there is still not enough information about the process of accumulation of social capital in buyer-supplier relationships and its contribution to the buyer performance (Lawson et al., 2008, p. 446). Lawson et al. (2008) added more depth to the study of Krause et al. (2007) in investigating the consequences of relational and structural capital, deriving from relational and structural embeddedness, in the context of buyer performance improvement in firms relationships with their key strategic suppliers (Lawson et al., 2008, p. 447). The influence of social capital on performance has been studied in numerous papers and the absence/presence (structural embeddedness) and strength of ties (relational embeddedness) has been neglected or approved of many

scholars (Lawson et al., 2008, p. 446). Therefore the outcome of the paper, that the "broader the range and intensity of supplier integration, the greater the accumulation of relational capital", is not a recent finding (Lawson et al., 2008, p. 456). As role model one can take a look at Toyota and Honda, who integrate with their supply base with the ulterior motive to build long term relationships and create relational capital, respect and reciprocity (Lawson et al., 2008, p. 456). Nevertheless, the study of Lawson et al. (2008) has aligned findings with previous studies and facilitates the effect, that relational capital between buyer and seller improves the buyer's performance (Lawson et al., 2008, p. 456).

All in all the listed literature shows a growing amount of research and findings within the field of supply chain management. Yet, all scholars propose more in-depth empirical research to clarify and define word for word, how social capital can be used to create value in the aforementioned context.

2.6.4 The Theory of Social Capital still Progressing

In order to assess the theory of social capital with regard to the life-cycle approach of Vos and Schiele (2014), this part draws on previous findings of this paper, when the question was solved whether social capital is a verified theory. In the same manner this section is based upon a model published in the afore-mentioned part of the paper (See appendix fig. 4). The model contains three stages of which the first two stages have already been processed within the means of this *Is it a Theory?*. (See 2.2) In short, theories must include several aspects in order to fulfill the first stage of the model called *Theoretical & Empirical Construction* and to proceed to the second stages. The second stage includes several virtues that predict whether the theory is valuable for organizational researchers and practitioners (Vos & Schiele, 2014, p. 8). The last stage clarifies whether the theory is further progressing or degenerating in the sense of its life-cycle. Vos and Schiele (2014) used the study of Lakatos (1970) and Vasquez (1997) as basis for the final decisional stage. The two authors formulated four characteristics to determine a theory as degenerating. (See appendix Fig. 2) So far the theory successfully fulfilled the basic requirements for a theory, but next to the bare essentials, also several virtues have to be fulfilled by the theory of social capital in order to assess whether it is degenerating or progressing. In the sense of *internal consistency*, although the theory is a slippery concept (Onyx & Bullen, 2000, p. 4) and the capital which originates within this process is no tangible (Coleman, 1988, p. 100), it fulfills the *internal consistency* criteria sufficiently through a definite process of how the capital emerges, identified in the observed literature. Onyx and Bullen (2000) conducted an empirical study which had the aim to clarify this process and assess the influence and relation of different attributes within this process like trust, reciprocity etc. The findings further developed an understanding of the factors and prioritized them according to the degree of influence they have on the establishment of beneficial capital (also fulfills the need for *empirical indicators*). The *scope and unity* of social capital is very large due to relatively unanalyzed status of the theory itself and the characteristics of the value which has emerged for the individuals (Coleman, 1988, p. 101). The value deviates strongly from context to context, that means it can take numerous forms which depend on the type of network, individuals, power of relationship and the resources they are willing to share depending on the level of trust within the group

(Coleman, 1988, p. 117; Onyx & Bullen, 2000, p. 24; R. Putnam, 1993, p. 2). Regarding the *external consistency* one has to say that social capital is embedded into several theoretical traditions (Onyx & Bullen, 2000, p. 24). Among these one can find from the early beginning in the work of Jacobs (1965) (NAHAPIET, 1998, p. 243) different concepts like human capital as in the work of Coleman (1988) or cultural capital in the work of Bourdieu (1986). Speaking of the *conservatism virtue*, social capital is definitely ahead of many predecessors, since it is constantly evolving through scholars which increasingly begin to quantify the phenomenon to extract connection towards economic value. The latter one is the biggest motivator nowadays to consciously prosper from social resources in order to create real benefits in terms of profit (Portes, 2000, pp. 2-3). Nevertheless there are also weaknesses of the theory in several criteria where it lacks quality. In the case of social capital these points begin with the *verifiability and operationality* which is not necessarily given due to its distinguishable effects and outcomes for different individuals (Coleman, 1988, p. 101) and few empirical studies to quantify and assess the theory in detail. As Onyx and Bullen (2000) phrased it: "As is usual with such research, we have some tantalizing answers but even more tantalizing questions to pursue." (Onyx & Bullen, 2000, p. 39). Furthermore regarding the *fruitfulness*, the *heuristics* and *practical importance* are of ambiguous character. On the one side the efforts conducted in order to further relate this topic towards the business sector are of increasing manner e.g. by Seibert and Kraimer (2001) through the already stated economical motivation by Portes (2000) but on the other side the problem of the quantitative assessment of the effects and variables of social capital significantly slows the progress of further development down as observed in the literature. Nevertheless Onyx and Bullen (2000) set the corner stones for the further quantification and empirical motivated papers in the field.

All in all, the theory of social capital has evolved from merely defining types of social capital in theory, for example in Bourdieu's (1986) paper, to applying the theory to many different contexts, like public life (Putnam 1993), the progression of criminality and delinquents with Vietnamese roots in the U.S. (Bankston I & Zhou, 1997) and finally to the sector of Business Administration (Maula et al., 2003; Portes, 2000). This transferability of the concept into many different areas and fields of expertise created a well-manifested theoretical basis within literature of all sorts. Specifically the latter shift to the sector of business and economics sheds new light on the theory, where it catches the attention of the broader public, due to the possibility to gain also economic capital in terms of money (Portes, 2000, pp. 2-3). Due to the latest empirical data which supports the relation between the accumulation of social capital and organizational performance and the rarity of empirical data in general, no contradictory evidence has been found yet to diminish the progressive character of the theory. Therefore the theory of social capital is found to be in the progressive state and is positioned in the second stage of the model. (See appendix Figure 4)

2.7 Prior Research Lacks in Precision and Empirics

Social capital is under an increasing recognition and is topic of many discussions across various fields of expertise. The theory is widely associated as source of competitive advantage and

value creation in many different contexts (Osborn & Hagedoorn, 1997, p. 268). The following sheds light on the often forgotten part, not as frequently mentioned as the advantages of social capital. Therefore this part contains a critical assessment of the theory itself and the method scholars investigated it with. Throughout this paper one should have noticed, that there is a broad variability of definitions and notions referring to social capital. This die due to the many different fields the authors stem from and therefore emphasize different aspects. Social capital can be seen as individual asset originating from access to networks and social connections or as shared asset that is contained in communities with aligned interest and shared values. Additional some authors emphasized trust and tolerance and others rather focused on the degree of social engagements as main driver of social capital. The next author then facilitates the influence of social norms and culture as most important. This shows, that the theory of social capital is heterogeneous and contains sets of distinct but related variables, which poses the question on how one could possibly identify an aggregate form of measurement (Quibria, 2002, p. 25). Dasgupta (2001) sees this as detrimental to the research in the field of social capital and criticizes that the heterogeneity of the theory leads to summarizing and combining of incomparable objects, such as beliefs, behavioral rules and interpersonal links without a framework on how to aggregate those. Therefore he suggests to study the factors separately from each other and to first fully understand them and subsequently find an appropriate method of combination. (Dasgupta & Serageldin, 2001, p. 327).

The above stated problems are also identified as by Durlauf (2002), who questions the existing 'empirics' on social capital. The problem of vagueness and the absence of an appropriate framework of exchangeability among the numerous factors make it hard to empirically justify benefits associated with social capital or the theory in general (Durlauf, 2002, p. 474). The resulting elusiveness of the theory seriously questions the empirical research in the field and manifests the opinion that social capital solely "...relies for its metaphoric power on the dominant dis-course of economics in a capitalist society" (Farr, 2004, p. 26). Aligned with Farr (2004), Durlauf (2002) previously stated that from his perspective the empirical evidence delivered by the literature fails to quantitatively and empirically justify the socio-economic outcomes of social capital (Durlauf, 2002, p. 459).

Concluding, in order to solve the aforementioned problems or at least attempt to clarify the concept of social capital, Durlauf (2002) emphasizes the introduction of economic experiments, that deliver a higher amount of empirical insights, than observations which only scratch the mere surface (Durlauf, 2002, p. 477). In combination with Dagupta's (2000) hints, to separately study the variables and subsequently find a method of combination, future research should be equipped to improve and validate social capital, also for the critics out there.

2.8 The Theory of Social Capital Differs from other Theories through its Versatility

The Theory of social contacts experienced a remarkable rise within the 1990s across several disciplines (Woolcock & Narayan, 2000, p. 225). Social capital stems from the field of sociology but by now encountered especially the field of business and economics. This is also what distinguishes the theory from others, like for example the x-efficiency theory. The latter is also an important and well discussed theory in the

same time frame as the theory of social capital but is solely applicable to the economic sector (Leibenstein, 1966, p. 392). In comparison to social capital many economic theories have a far more restricted field of application and therefore as far as literature is concerned less existence. Social Capital can range from gaining a membership to an exclusive club in the daily life to explaining to what extent managers can use certain dimensions (as for example in mentioned case of Honda) to attain competitive advantage and manifest their position in the global market. Especially with the shift from the field of sociology to economics granted the theory of social capital lots of attention from of many new scholars, as for example policy makers and others interested in economic value (Portes, 2000, pp. 2-3). Furthermore the high amount of attention the theory of social capital receives, does not solely refer to the multiple applicability of the theory but also to its simplicity. There are many different definitions, which partly can be difficult to grasp at first, but it boils down to defining social capital as merely 'norms and networks that enable people to act collectively' (Woolcock & Narayan, 2000, p. 226). The simplicity of the core concept of the theory of social capital and diversified contexts it influences are proof enough to denote the theory as developing. With focus on the future tendencies of the theory, the literature suggests that the synergy view, referring to incorporating different levels and dimensions of social capital and the positive or negative effect it can generate, has attracted the most empirical attention (Woolcock & Narayan, 2000, p. 225).

Future research could highlight additional fields of application, as for example innovation, and built a solid empirical basis to find more means to benefit from the theory (Zheng, 2010, p. 151). It is very likely, that the most prospective attention and focus in the field of social capital will be directed towards economic beneficial outcomes. With this connection made by many authors (Krause et al., 2007; Maula et al., 2003; Seibert, Kraimer, & Liden, 2001), one can expect increasing interest in the field and a high demand for empirical data on behalf of for profit organizations.

3. THEORY AND THE DECISION POINTS IN SUPPLY MANAGEMENT

3.1 Decision Point 1: Make or Buy; Accurate Risk Assessment through Informal Information

The topic of make or buy gains special importance when observed with a supply lens. Organizations are able to use outsourcing to leverage their internal and external resources, in order to obtain the best value possible. Furthermore, the in- or outsource decision could allow organizations to part- or sub assembly certain products and therefore focus the superfluous resources on more important sectors (Mantel et al 2006, p.822). The theory of social capital could be used to influence the make or buy decision, if considered under a behavioral approach. Mantel et al (2006) took this approach and suggested three factor influencing the make or buy decision on the decision-makers behalf: core competencies, information sufficiency and strategic vulnerability. (Mantel et al 2006, p.827) Hereby, the factor of core competencies will be left out, because it is too wide a subject. Information sufficiency is required in order to asses and value opportunities and risk of the outsource decision and sources are categorized as formal (secondary data / industry publication) or informal (personal acquaintances or friends).

Strategic vulnerability is described as perceived supply risk through low amount of eligible suppliers and high costs of setting up the outsourcing relationship (Mantel et al 2006, p.827).

Who consciously read the paper up to this point, knows that social capital strongly supports the accumulation of information, besides many other resources, within groups (Adler and Kwon 2002, p. 23). Furthermore one benefit of social capital, especially in the context of weak ties, is the unique access to informal information, which bestows upon the receiving part more bargaining power and control over resources and outcomes (Lin, 1999, p. 220). These benefits are also of advantage for the factors essential to the make or buy decision. Clearly, the information sufficiency is likely to be positively altered by the access to unique information, for example about possible risks or opportunities. In practice this could include organizations that formerly outsourced with the help of a certain supplier and provide feedback concerning the efficiency or performance of the supplier to a third organization. This also has beneficial effects on the third factor of strategic vulnerability. A broader base of information and connections within the supplier field could make it possible to benchmark and compare suppliers according to their performance and quality in order to decrease the costs associated with the setting up of the relationship. Within this context the relational dimension might be especially important due to the establishment of a history of relations and engagement with one specific contact, who would then be the source of informal information (NAHAPIET, 1998, p. 244). The latter fact in aligned with the findings of Mantel et al (2006), which suggest that informal sources of information are more credible and deliver higher quality information. (Mantel, Tatikonda, & Liao, 2006, p. 827)

Concluding, one can confirm the impact social capital has on the make or buy decision. To fully proof the correlation, further empirical research is needed, which provides quantitative data approving of the assumption

3.2 Decision Point 2: Sourcing Strategies; Assuring Conformity among Offshore Suppliers

Sourcing strategies are crucial to obtain competitive advantage, particularly in times, where supply chain risks are of increasing nature and supplier failure is one of the top three reasons for the high risk. In order to assess to what degree social capital influences sourcing strategies, the strategy of global sourcing was chosen. Global sourcing is a well-known and broadly recognized strategy, to gain access to low cost offshore suppliers (PrasannaVenkatesan & Kumanan, 2012, p. 325).

As basis for the assessment of the importance of social capital for the offshore-sourcing strategy, data will be used from the research of Rottman (2008), who interviewed the fortune 100 US manufacturing firms to analyze their management of global IT suppliers. According to Rottman (2008), each dimension of social capital (mentioned above) correlates to practices utilized by the companies in the offshore management. To decrease risks while enhancing the network structure, practices were developed by US manufacturers for effective knowledge transfer relating to the three dimensions. Firstly as part of the structural dimension, they strengthened network ties and

broadened social networks, by utilizing multiple suppliers. This led to a development of internal teams as far as their skills and expertise are concerned, due to the confrontation with divergent vendors with different work processes and unique expertise (Rottman, 2008, p. 13). Secondly as part of the relational dimension, the companies focused on the issue of trust (Coleman, 1988, p. 117). To higher the level of trust among employees into the organization, a special team analyzed the internal human resource systems and project pipeline, to gain more knowledge of how to better manage the workforce (Rottman, 2008, p. 23). Last but not least, actions stemming from the cognitive dimension were employed to prevent cultural conflicts and to mediate between the different cultures. Special attention was given to offshore locations, because here discrepancies in several aspects, such as culture and language, are present. The main actions were several visits of the offshore suppliers and project teams to comprehend the environment and build personal relations. This measure, did not occur to managers for years and therefore was a big step ahead (Rottman, 2008, p. 23). Another measure, was the integration of offshore employees into development teams, to encourage the knowledge transfer and remove the often negative reputation of offshore suppliers (Rottman, 2008, p. 20).

The above mentioned examples from the fortune 100 US manufacturing firms clearly show the applicability and importance of social capital within segment of sourcing strategies. The organization gained by employing the social capital model network stability, stronger network ties and a better understanding of common goals (Rottman, 2008, p. 26).

3.3 Decision Point 3: Supplier Strategies; Establishment of a Deeper and more Valuable Supplier Relationship

Adopting a social capital lens e, one supplier strategy is particularly of interest – supplier development. Supplier development describes efforts, made by manufacturers, to higher the amount of viable suppliers and increase their performance (Krause et al., 2007, p. 529). Krause et al. (2007) took data from US buying firms to analyze the relationship between supplier development and the accumulation of social capital and the buying firm's performance. The scholars

identified linkages of how supplier development and the aspects of structural, relational and cognitive social capital are influencing the performance of the individual firms. The outcomes show different effect of the dimension as far as the performance of the firms is concerned. Especially the cognitive dimension and the relational dimension were sensitive to the topic of total costs improvements. On the other hand when it comes to the explanation of quality, delivery and flexibility performance, structural capital as in supplier development and cognitive capital as in the form of shared values, were dominant (Krause et al., 2007, p. 540). Additionally, direct involvement with the supplier seems to have a positive influence on quality, delivery and flexibility performance. In this case, direct involvement mean similar measures as in the case of 'sourcing strategies' and contain regular visits of suppliers and development teams to improve skills on both sides and to better the understanding. Those measures are found to be important for the process of knowledge transfer, which is also a benefit of social capital (Krause et al., 2007, p. 540).

In the end, the research findings show, that the dimensions of social capital are useful concepts to fully prosper in supplier development and grasp all benefits of it. So far, the transaction cost economies are commonly applied in order to assess supply chain strategies but with more research, the theory of social capital could offer an alternative to grant a deeper understanding of the complexities within the supplier-buyer relationships (Krause et al., 2007, p. 541).

3.4 Decision Point 4: Contracting; Creating a Win-win Situation

The process of establishing a common agreement and aligned interests among groups or parties with the help of a written contract is highly reliable on trust. This dependency on the topic of trust also connects the theory of social capital with contracting. The general assumption of Coleman (1988) is, that a strong appearance of social capital substitutes legal contracts and is assurance enough to guarantee a certain reciprocity (Coleman, 1988, p. 99). In more detail Guiso et al. (2000) states, that if the trust level falls, at the same time the subgroups narrow down one can conduct transactions with on a common understanding. This means that with high trust one can process transactions with big groups without the help of contracts but

Table 1 Summary of findings related to the decision points

Decision Points				
Theory	Make or Buy; Accurate risk assessment through informal information	Sourcing Strategies; Ensuring conformity among offshore suppliers	Supplier Strategies; Establishment of a deeper and more valuable supplier relationship	Contracting; Creating a win- win situation
Social Capital Theory	<ul style="list-style-type: none"> -High information sharing -More bargaining power due to unique access to information and resources -Better risk assessment 	<ul style="list-style-type: none"> -Improved relations with offshore suppliers -Continuous progression of competencies and skills of employees -Encouraged information sharing 	<ul style="list-style-type: none"> -Enhanced obtainment of benefits of supplier development -Beneficial value adding on both sides -Creating of competitive advantage 	<ul style="list-style-type: none"> -Partnership formation -Establishment of trust among contract partners enhances beneficial outcomes for both side

at a low trust level only close friends or family still fall under this category (Guiso, Sapienza, & Zingales, 2000, p. 3). Knack and Keefer (1997) explain this phenomenon with the help of the lower risk of economic and financial exploitation among groups of high trust and therefore less need of contractual protection (Knack & Keefer, 1997, p. 1252). Guiso et al. (2000) further found, that trust goes beyond the equilibrium outcome of a society where legal enforcement is the incentive to maintain the legal obligations. This leads to the conclusion that the use of contracts and the effect of trust are higher in the case of weak

law enforcement and less efficient executives of such a system. In the same way, the effect of trust can also be strengthened with scenarios containing illiterate or less-educated individuals who have to rely on the contracting mechanisms to reduce the exploitation risk. In application, this describes the situation in many developing countries, where one finds a low educational level and a weak law enforcement system (Guiso et al., 2000, p. 3). In this sense, social capital is able to build a solid basis of trust among partners, to simplify the mediation within the process of establishing a contract and higher the chances of a beneficial outcome for both sides of business.

All in all, the assessment of the decision points showed a correlation between social capital and the specific aspects of supply chain management (see Table 1). Additional empirical findings specify in detail the action, which are worth implementing in order to grasp all benefits of the accumulation of social benefit in business application.

4. SOCIAL CAPITAL AS VALUABLE RESOURCE FOR THE FIELD OF SUPPLY CHAIN MANAGEMENT

This paper investigated the potentially beneficial relation between social capital and supply chain management and especially the sector of purchasing. In order to provide a valid and detailed answer the research started with finding an appropriate definition of the theory. Therefore the history of social capital was reviewed and the founding fathers of social capital, such as Bourdieu, Coleman and the philosophy of Marx. Throughout the history of the theory numerous definitions have been given and the most complete has been created by Adler and Kwon (2002) (Adler and Kwon 2002, p. 23). To further fully grasp the development of the theory and grant an understanding of following research results, presented in this paper, many different approaches were taken into account, namely Granovetter (1973) and his support for the higher efficiency of weak ties within a network in order to obtain access to information (Lin, 1999, p. 220), Burt's (2000) structural holes approach which takes the position of favoring discontinuities in relationships between actors and with that focuses on the structure instead of the characteristics of the single ties and finally (Lin, 1999, p. 220), Lin et al. (1981) with their social resource approach that mentions the mere instrumentality of the ties and emphasizes the specific type of resource made available and accelerating the individuals' journey to the desired goal (Lin et al., 1981, pp. 1165-1166). Defining the main model and variables of the theory showed the enormous fungibility of the theory of social capital within many different fields of expertise. Accordingly, the literature review presents the work of many different scholars who continuously developed social capital and renewed aspects. Therefore most

variables were already established within the earlier research, such as norms (Coleman, 1988, p. 96; R. Putnam, 1993, p. 2) trust (Coleman, 1988, p. 117; R. Putnam, 1993, p. 2) and reciprocity (R. Putnam, 1993, p. 2) and then features and categories e.g. the three dimensions of Nahapiet and Ghoshal (1998) have been incorporated. On the basis of literature review most chapters rely and were benchmarked. Next to that part of the hypothesis has been confirmed when social capital qualified as theory. Although some authors described the theory of social capital as slippery and vague (Farr, 2004, p. 6; Onyx & Bullen, 2000, p. 4), the framework of Vos and Schiele (2014) (see appendix Fig.1 and Fig.2) clearly resolved this concern. Furthermore to evaluate in how far social capital is beneficial for the field of supply chain management, literature solely concerning this area has been summarized and showed an increasing interest over the years in beneficial use of social capital in the field supply chain management. This interest is not of declining nature as the application of the 'life-cycle of theories'-model (See appendix Fig.4) showed. This persistent progressivity is due to the found relation between social capital and economic value, which attracts the interest of the broader public (Portes, 2000, pp. 2-3). Four aspects of supply chain management have been assessed in detail to investigate whether social capital is related to this part of business. All four aspects speak in favor of a positive relation, if implemented correctly. The accumulation of social capital helps the business to prosper from assessing the 'make or buy'-decision, sourcing strategies, supplier strategies and contracting. Especially the field of sourcing strategies, global sourcing was intensively examined for connections to social capital by Rottman (2008). The findings of Rottman's (2008) research, assures the author of this paper that similar research concerning the other three aspects would yield comparable results. Nevertheless there is some criticism regarding social capital, as for example the variability of the concept and the difficulty of establishing quantitative data of the different variables and connecting it in a reasonable way. (Dasgupta & Stiglitz, 2001, p. 327; Quibria, 2002, p. 25) Some authors neglect the literature referring to social capital, because of the low internal and external validity of the empirical findings (Durlauf, 2002, p. 477).

In summary the findings of this paper verify the relationship of social capital and supply chain management and results in the view that social capital is an unsound theory and can contribute to performance gains within the sector of supply chain management. These findings are supported by the results of Krause et al. (2007) who state, that social capital yields considerable value for creating and the sharing of knowledge in supply chain management (Krause et al., 2007, p. 540). Regarding the limitations of this paper, the above mentioned criticism of Durlauf (2002) applies, since the same literature, as formerly assessed by him, has been used. Therefore it cannot be guaranteed that all assumptions and propositions made within the terms of the aforementioned will be validated by further empirical research in the field. To tackle exactly this problem future research should be concerned with empirics and experiments concerning the field of supply chain management, to increase the external validity of the findings and clarify the relationship between the theory of social capital and economic factors, such as supply chain management.

APPENDIX

Element	Description	Fulfill Yes
Theory Development	Units / What?	0
	Laws / How?	0
	Boundaries / Who, when & where?	0
	The system states	0
	Why?	0
Empirical Development	The propositions	0
	Empirical indicators	0
	The hypotheses	0
	Empirical research	0

Figure 1 Checklist for determining criteria

Source: Vos and Schiele (2000), p.18

Element	Description	Degree
		Low - 1
Internal Virtue	Internal consistency and coherence	0 0
	empirical validity, verifiability and operationality	0 0
External Virtue	Scope and unity	0 0
	External consistency	0 0
	Conservatism	0 0
	Fruitfulness	0 0
Degenerative Characteristics	Reformulations	0 0
	Insights	0 0
	Findings	0 0
	Theory Shifts	0 0

Figure 2 Measurement Scheme for Virtues & Progress of Predictive Theory

Source: Vos and Schiele (2000), p.19

Social Capital Correlations With Demographic Variables

Social Capital Factor	Demographic Questions—Correlations With Factor Scores									
	Q70	Q71	Q72	Q73	Q75	Q76	Q79	Q82	Q83	Q85
A. Participation in the Local Community	0.06	0.02	0.00	0.10	0.22	0.05	0.16	0.19	0.04	0.22
B. Social Agency, or Proactivity in a Social Context	-0.16	0.05	0.13	0.16	0.00	0.08	-0.04	0.01	0.04	0.14
C. Feelings of Trust and Safety	0.06	0.13	0.06	0.04	0.13	0.08	0.17	0.10	-0.15	0.11
D. Neighborhood Connections	0.17	-0.18	-0.17	-0.14	0.18	0.03	0.26	0.19	0.04	0.21
E. Family and Friends Connections	-0.06	0.09	0.08	0.13	-0.09	0.03	-0.05	0.00	0.09	-0.22
F. Tolerance of Diversity	-0.09	0.06	0.09	0.17	-0.08	0.00	-0.20	0.03	0.02	-0.16
G. Value of Life	0.08	0.06	0.10	0.07	0.06	0.02	0.15	0.16	0.05	0.10
H. Work Connections	0.18	-0.03	-0.06	0.01	0.11	0.09	0.17	0.13	0.09	0.06
B. Proactivity in a Social Context (employees)	-0.24	0.08	0.13	0.19	-0.07	0.15	-0.18	-0.01	0.09	0.16
Social capital—General	0.01	0.05	0.04	0.12	0.15	0.10	0.16	0.22	0.02	0.17
Social capital—General (employees)	0.05	-0.03	0.00	0.13	0.13	0.13	0.14	0.22	0.08	0.19

NOTE: Q70 = work outside local community; Q71 = employed, hours per week; Q72 = salary; Q73 = qualifications; Q75 = number of children; Q76 = English language at home; Q79 = years in local area; Q82 = church attendance; Q83 = gender; Q85 = age.

Figure 3 Social Capital Correlations with Demographic Variables

Source: Onyx and Bullen (2000), p. 37

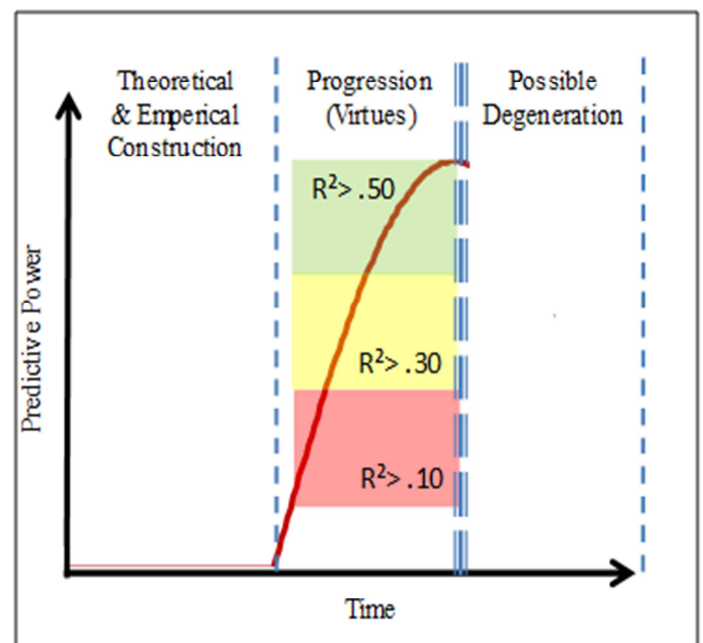


Figure 4 The Life-Cycle of Theories

Source: Vos and Schiele (2014), p. 9

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