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**CAPITAL APPROACH TO SUSTAINABLE DEVELOPMENT – HUMAN AND SOCIAL
CAPITAL
SELECTION FROM SOME STUDIES**

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1. Capital in economics is something produced in one time period to be used in the production of other goods and income during future time periods. Capital is often explained in juxtaposition to consumption: it is not assigned to serve immediate needs or demands. Rather, it is an intermediate product for producing other goods in the future with higher productivity (it is a factor of production, not consumption). In short term capital is an instrument. It is closely related to investment: postponing present consumption in favour of investing into capital which enables us to have higher consumption in the future.

2. Nowadays is capital very frequently define more metaphorically as “resource that can generate a stream of benefits over time” (OECD, 2001) or the users very simply define capital as „assets which will generate income in the future“. We can used also following definition:

„All forms of capital can be understood as assets of various kinds, however they were created. Assets are things that yield streams of benefit that make future productive processes more efficient, more effective, more innovative, or simply expanded.“

3. In short, there is a strong tendency to estrange the term “capital” from its economic usage and use it much more broadly. For our purposes, we may draw on a common sense definition of capital and define capital as:

“Any form of long-term assets employed or capable of being employed in the production of more assets or in the production of desirable outputs more effectively.”

4. From certain point of view capital is not the most appropriate term. Given its long history in economics, it may be misleading since some forms of capital (human and social) cannot be

treated too analogically with physical capital. As we will also see, the various forms of capital should be termed more appropriately otherwise (for instance, human capital in its current meaning is what used to be called human potential or human resources and social capital resembles the notion of social cohesion).

5. But there are two main important reasons why we can find the capital metaphor useful. First, it has proved to initiate interdisciplinary discussion of development and brought together scientists and policy analysts from various areas and it may provide a common ground for balancing economic, social, and environment objectives. Second, capital conceptualization gives us an important lecture in that the development of society is not stochastic or random. We do not live in a world of complete coincidence. There are many embedded and long-term constraints that limit achieving preferred choices. Furthermore, it explicitly states that if we “invest” in capital formation instead of current consumption we are more likely to enhance our well-being in the future. Or said it in another way, if we use too much capital for current purposes, we may seriously diminish the level of future well-being.

6. Let us now turn to the forms of capital one may recognize. Traditional **economic theory** divided productive factors (inputs) into three groups - natural resources, human labour and man made goods (financial and physical capital). Thus classical economic theory tended to see capital as physical items such as tools, buildings and vehicles.

7. Over time, however, the other inputs, natural resources and human labour, began to be referred to as capital as well. In the early 1960's economists such as Schultz and Becker reintroduced Adam Smith's term, human capital, to refer to how educated and healthy workers productively utilized other 'capital' inputs. Recently, new form of capital – social capital – was added. There are also attempts to include “knowledge” or “intellectual” capital..

8. We can identify six main forms of capital as follows:

- natural (or ecological) capital;
- physical capital;
- financial capital;
- human capital;
- social capital;
- cultural capital.

9. By natural (or ecological) capital we understand natural resources that are precious, such as soil, forests, atmosphere and minerals. Physical capital consists of concrete material 'man made' objects which are used to make other goods, e.g. buildings, roads, and technology, tools, machines. Financial capital is understood as liquidated money used in the production of future income. Examples are stocks and bonds.

HUMAN CAPITAL

Changing Conceptualization of Human Capital

10. The idea that investment in education and health has a long-term economic and social payoff for the individual and society traces back to Adam Smith if not earlier. The concept of human capital, however, was not fully developed until the early 1960s when Schultz (1961) analyzed educational expenditure as a form of investment and Becker (1964) published a book with the title *Human Capital*. Since then the notion of human capital has gone through substantial development. Even the quick glance on definitions illustrates changing approaches to human capital.

11. Originally the concept of human capital referred to the fact that individual human beings invest in themselves (by means of education, training and other activities) which raises their future income by increasing their lifetime earnings (Woodhall 1987). In the beginning human capital was considered almost entirely as analogical to physical capital. Therefore research focused on returns to education measured usually as an increase in earnings given by the level of education. According to one Canadian review (Statistics Canada 2001), in these writings, human capital was usually defined as

“the aggregation of investments in activities, such as education, health, on-the-job training, and migration that enhance an individual’s productivity in the labour market.”

12. Similarly narrow view of human capital was captured for instance in The Social Science Encyclopedia :

“Human capital is a stock of acquired talents, skills and knowledge which may enhance a worker’s earnings power in the labour market”.

13. More recently, concept of human capital has been expanded to include non-market activities. For example, the Organization for Economic Cooperation and Development (OECD 1996) defined human capital as:

“... the knowledge that individuals acquire during their life and use to produce goods, services or ideas in market or non-market circumstances”.

14. This definition ignored the source of knowledge acquisition (formal, informal, family or school, job, etc.) and disregarded both the specific nature of the competences acquired and the methods for validating them. This concept was also openly criticized for reducing education functions only to economic ones and likening people to packages of knowledge and skills, little different from machinery components.

15. In response to this criticism, OECD influential publication *Human Capital Investment* (1998) redefined human capital and emphasized how important people have become in knowledge- and competence-based economies. Yet, it still adopted a rather narrow definition of human capital:

“The knowledge, skills, competences and other attributes embodied in individuals that are relevant to economic activity” (OECD 1998).

16. Human capital was understood here in economic terms and as “an intangible asset with the capacity to enhance or support productivity, innovation, and employability” . Though it explicitly stated the “consumption” value of education, human capital was still considered only as a productive factor. . In other words, it looks at the value of human capital investment for production rather than directly for consumption. Consequently, the study focused mainly upon economic benefits of education. For example, it acknowledged attributes that create better health insofar as this has economic or social spin-offs.

17. Very recently social scientists have begun to recognize that even this definition of human capital is too narrow because it misses certain crucial aspects of human capital and may serve as a poor guide for the development of public policy. For example, Laroche et. al. (1999:) have suggested that the traditional definition of human capital should be expanded to include the potential to acquire human capital, as well as its actual acquisition. They defined human capital as:

“the aggregation of the innate abilities and the knowledge and skills that individuals acquire and develop throughout their lifetime”.

18. Ruggeri and Yu (2000) argued that human capital is a multi-faceted and dynamic process. They suggested that human capital should be expanded so as to include four dimensions: (a) potential, (b) acquisition, (c) availability and (d) effectiveness. The first two dimensions incorporate the broad definition of human capital given by Laroche et al. The third stresses the distinction between human capital incorporated in the residents of a country and that portion of it available for productive activities in that country. This distinction takes into consideration the importation and exportation of human capital and addresses directly the issue of brain drain. The final dimension incorporates the effects of utilization and performance, reflecting to some degree the demand side of human capital.

19. The broadening of human capital conceptualization has come to its head in the OECD report on *The Well-being of Nations* where human capital has been defined as:

“The knowledge, skills, competencies and attributes embodied in individuals that facilitate the creation of personal, social and economic well-being” (OECD 2001)

20. In the same vein non-economic benefits of human capital were given much more attention. In OECD publication (2002) this trend towards broadening human capital concept is articulated in chapter *“Rethinking Human Capital”* endorsing “wider human capital”.

21. In this sense human capital approximates the concept of human potential or human resources as it stresses many more elements than primarily economic ones. It is clear that such widening has its negatives, too. It blurs capital metaphor, and it may suffer from vagueness or a lack of measurability. However, qualities such as creativity and motivational characteristics are

too important to be let aside when considering well-being and development. The way out is not to limit human capital to elements that are easily measurable and directly linked to economic development but deconstruct human capital into elements that may be clarified and analyze the links among them.

Deconstructing Human Capital and the Idea of Core Competencies

22. Human capital usually refers to “the knowledge, information, ideas, skills, and health of individuals” (Becker 2000). However, until recently the term human capital has been fully applied only to education, and not so much to health or immigration. The question is to what elements we can decompose human capital to make the term open to empirical investigation.

23. According to the recent and already mentioned study by OECD (2002: 123-124), fuller conception of human capital should comprise:

“Basic human capital – productive capacities and characteristics (like carpentry skills, physical strength, creativity, communication ability). These can be thought as “skills”, broadly defined.

Wider human capital – characteristics that allow a person to build, manage and deploy basic human capital. This includes:

- the ability to acquire and develop skills. This includes skills in learning, in identifying one’s learning needs and in managing one’s learning activity;
- the ability to find the best place to utilize these skills. This includes career planning, job search and presenting oneself to employers and the ability to blend working and personal objectives;
- personal characteristics (like trustworthiness) which make a person more attractive as an employee, because they are more likely to deploy their skills productively. Motivational characteristics are likely to be central”.

24. The goal of education is to prepare for life and work – we must consider the development of “whole” individuals. The diversity of human capital elements has been well illustrated in the OECD exercise “Definition and Selection of Competencies”¹¹ in which a number of OECD countries collaborated to identify competencies for life. Many commonalities and interrelationships between lists of desirable competencies of different countries were found. There is a consensus that social competencies, communication, lifelong learning, personal competencies and those necessary for participation in the political or civil life are important.

Sources of human capital

25. In this chapter I would like to address the question of how the human capital is developed. Clearly, human capital is created in very different settings. As for the “educational part” of human capital, the most important sources of human capital are as follows (OECD 1998: 12):

- formal education (at different levels – early childhood, school-based compulsory education, post-compulsory vocational or general education, tertiary education, adult education etc.);
- informal environments – families, interest networks, and communities;

- non-formal enterprise-based training and public labour market training;
- the experience acquired in *working life* in different types of organization and through specific activities such as R&D;
- media and information networks.

26. The formal education still holds a prominent role in explaining human capital formation. The stock of human capital is associated mainly with innate abilities and attained education and the interdependence between them. Consequently, financial or personal resources (and time) devoted to education are used as proxies for human capital (often called “educated population”).

27. This approach has proven valuable in developing countries or within impoverished settings but seems to be less appropriate for more developed countries, since there is some evidence of diminishing returns to spending on formal education in more economically developed countries. An important conclusion from empirical research is that we have to ask not only “how much sources are spent” but also “how they are distributed”.

28. For example, much of the increased spending in recent decades has been allowed to reductions in class size. Research showed that small classes indeed yielded somewhat better attainment according to student test data. However, it has also been shown that increased spending through expansion in educational participation (especially in achieving lower early school drop-out) may produce better results than increased spending per student grade-year (OECD 2002: 22).

29. In contrast to the prevailing view, social scientists have been long aware that genetically inherited innate qualities and educational system tell only a part of the human capital story. In explaining the uneven distribution of the human capital in population, one cannot omit the family background since it is there where the essential basis for future acquisition of human capital is provided.

30. In empirical research, the issue of human capital inequalities resulting from family backgrounds is usually conceptualized around various determinants of student achievement. Empirical studies for OECD countries showed that young people whose parents have completed some tertiary education are about twice as likely to participate in tertiary education as those whose parents lack upper secondary qualification (OECD 2002). Well-educated people tend to be affluent, with their affluence allowing them to subsidize their children to go to university. Education may also increase cognitive skills and knowledge of parents, allowing their children to be in close touch with people who may easily and correctly answer their questions. Educated people have also “elaborated language code” needed for success at school.

31. However, the available evidence also shows that it is not possible to explain the persistence of the intergenerational inequality simply by reference to advantages of wealth or the inheritance or transmission of cognitive skills of parents. A very important role must be attributed to behavioral aspects, including parental expectations about children’s education and traits passed from parents to child such as future-directedness (OECD 2002:).

32. The sources of “health capital” are even more difficult to debunk. Health capital is determined by a number of inputs including the quality and accessibility of the health system, the state of medical knowledge, public infrastructure affecting health (roads, water facilities, sewage treatment), the state of the environment, and individual life styles (which are often shaped and constrained by the environment in which a person has developed) (Sharpe 2001).

Indicators and measurement of human capital

33. Nowadays the concept of human capital is very broad encompassing many quantitative and qualitative factors. Social scientists have attempted to explain the major aspects of human capital through the development of appropriate indicators. Some of these indicators have been developed exclusively for human capital, though more often they are parts of a more general set of social and/or health indicators¹².

34. Though there are many other sets of human capital indicators (e.g. in “Human development indicators” or “World Development Indicators”) no official estimates of human capital in any country around the world have been in existence so far.

35. Health and education indicators are of a very different nature, which reflects different ways of “education” and “health” capital accumulation. As for education, we should speak rather of proxies of human capital than of indicators since the stock of competencies is usually measured indirectly. Given the serious limitations of proxies such as educational attainment, recently there have been attempts – very expensive as they are – to measure the stock of knowledge and skills directly. The most valuable examples include TIMSS, PISA and adult literacy surveys (IALS and SIALS).

36. Unlike education, some dimensions of health, health status may be measured much more directly. On the other hand, as I have already put above, “health capital” is determined by a number of inputs and this makes the links between the input and the output even more ambiguous than in the case of education. Consequently, any recommendations for policy measures are very difficult to make.

37. One of the most successful attempts in human capital operationalization was made by Sharpe (2001). He considers two main areas of human capital: education and health. The indicators in these areas are divided into outcome indicators and input indicators. The outcome indicators are in turn broken down into a small number of summary outcome indicators and a much larger number of specific outcome indicators. The input indicators are also broken down in a similar manner (see Table 1).

Table 1. Taxonomy of human capital indicators

Outcome Indicators		Input Indicators	
Education Indicators	Summary	General and specific knowledge and skill sets of the population (e.g. IALS survey)	Total resources devoted by government and/or individuals to all forms of education and training (in per capita and real terms) enrolment rates in postsecondary education. educational infrastructure; student-teacher ratios; teaching materials; incidence and length of workplace training; extent of government training and retraining programs; extent of post-secondary educational opportunities; enrolment rates in specific programs; and importance of a life long learning culture.
	Specific	average educational attainment of the population, appearance of generalized skill shortages, test scores in various subject areas and for different age groups; high school completion rates; university and community college completion rates; educational completion rates by socio-economic characteristics; skill shortages in specific areas; and net in-migration or out-migration of persons with specific skill sets.	
Health Indicators	Summary	Self-reported health status average life expectancy at birth of the population, the years of health-adjusted life expectancy (HALE) or years of life that are disability free.	total resources devoted by government and/or individuals to the health system, resources devoted to the advancement of medical knowledge, and resources devoted to infrastructure affecting public health.

Specific	<ul style="list-style-type: none">. infant mortality rates;. incidence of low birth rate babies;. morbidity rates;. incidence of obesity;. incidence of arthritis;. incidence of diabetes;. incidence of chronic pain;. incidence of depression;. incidence of cancer;. incidence of heart disease;. incidence of suicide;. incidence of accidents or unintentional injuries or deaths;. incidence of HIV/AIDS;. work absentee rate;. health status and life expectancy by socio-economic groups;. the risk of financial insecurity from illness; and. incidence of persons with activity limitation.	<ul style="list-style-type: none">. Quality and accessibility of the health system. proportion of medical procedures covered by universal health system;. proportion of the population covered by a universal health care system;. proportion of disposable income devoted to private health costs;. number of doctors and other health care professionals per capita at the national level and at the regional level, including remote regions;. hospital beds per capita;. MRIs and other advanced medical equipment per capita; and. waiting time for health services. Advancement of medical knowledge. resources devoted to medical research in Canada and elsewhere;. number of medical researchers in Canada and elsewhere; and. number of significant medical advances in Canada and elsewhere. Public policy decisions affecting public health. expenditure on improving roads and highways;. expenditure on sewage treatment facilities;. expenditure on water treatment facilities; and. regulatory framework for workplace health and safety.. Environmental determinants of health. state of workplace health and safety;. air quality; and. water quality.. Individual lifestyles. incidence of smoking;. incidence of heavy drinking;. incidence of physical activity and fitness;. incidence of teen births;. incidence of breastfeeding; and. incidence of extreme stress.
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Source: Sharpe (2001)

38. As it may be seen from the table, Sharpe makes the case that the two most appropriate summary human capital indicators in the education area are the average educational attainment and the literacy levels based on international testing; in the health area, the two most appropriate summary indicators are the self-reported health status and the health-adjusted life expectancy.

Outcomes – empirical evidence on human capital benefits

39. The positive outcomes of human capital are well documented. There are lots of that empirical studies focused on both individual and social benefits of education. Here I will limit myself to a brief review of the main findings needed for overall discussion of the knowledge-driven society¹³. We may distinguish between the economic and the wider social benefits and also between the private and the public benefits of human capital enhancement (See Table 2).

Table 2. Taxonomy of human capital benefits

Private Benefits	Public Benefits	
Economic Benefits	I.	II.
Wider Social Benefits	III.	IV.

40. Let us begin with private economic benefits, which are at the core of the original human capital theory (I.). It is a well-supported thesis that better-educated people are more likely to be at work, and if economically active, are less likely to be unemployed. Several studies indicate that an additional year of schooling is associated with, on average, between 5 and 15% higher earnings though the variations among countries may be quite high. Similarly, the data from IALS (OECD and Statistics Canada 2000) show that education, literacy, experience, parent's education and the use of native language account for between 20 to 50 per cent of the total variations in the labour market earnings.

41. In addition to the benefits captured by individuals, investment in human capital may yield benefits to the economy at large (II.). The collective economic impact should, in principle, be identifiable in the rate of economic growth, but in practice the impact has been difficult to confirm and quantify. According to a recent OECD work:

“the improvement in human capital has been of the key factors behind the growth process of the past decades in all OECD countries, but especially so in Germany (mainly in the 1980s), Italy, Greece, the Netherlands and Spain where the increase in human capital accounted for more than half a percentage acceleration in growth with respect to the previous decade” (OECD 2000).

42. For OECD countries as a whole the implication is that one extra year of full-time education (corresponding to a rise in human capital by about 10%) leads, on average and in the long run, to an increase in output per capita of between 4 and 7 per cent (OECD 2001). Yet, such conclusions are inevitably intensively questioned. For instance, Korea has seen a dramatic increase in the educational attainment of the labour force. Between 1966 and 1990, the proportion of the working population with secondary level education or higher roughly trebled, from 27 to 75 percent. Yet this dramatic expansion does not translate into an equally dramatic effect on the growth rate .

43. Thus during the last ten years or so, the growth researchers have bounced from identifying quite dramatic effects of education on economic growth to calling into question the existence of any effect at all. Recent research is placed somewhere in between these two extremes but perhaps leaning closer to the findings that education has a major impact.

44. Two important things must be stressed. Firstly, the quality of schools (though very difficult to measure) seems to be a more powerful explanation of economic growth than simply the number of years of schooling. The empirical evidence may be found in Barro (2001) who used data from international tests of the cognitive ability in mathematics and science. Secondly, the marginal impact of increases in various levels of education appears to vary greatly according to the state of a country's development. A study by Mingat and Tan (1996) found that the level of higher education is most important in high-income countries, and that the primary education levels are a significant motor of growth in the developing countries. This finding suggests that the expansion of any one level of education may yield diminishing returns over time.

45. In addition to economic growth, there are more direct and provable overall economic benefits of education. Higher levels of education are associated with lower rates of unemployment and hence lower probability of receiving social transfer benefits. The society benefits also from higher taxes levied on more educated people, who usually have higher earnings.

46. Let us turn our attention towards a wide range of non-economic benefits of human capital. Using controls for income, race, social status and other variables, the research has shown that education tends to be correlated with:

- better health;
- lower crime and delinquency rates;
- higher civic participation, volunteering and charity giving;
- promotion of education to next generation;
- higher rates of self-reported happiness.

SOCIAL CAPITAL

Emergence of Social Capital: Long Neglect and Current Abuse

47. The notion of social capital is the most recent development in the thinking about capital. Nowadays social capital is a very fashionable term. It has been proposed as the answer to a wide variety of problems, so it is sometimes claimed that the word means "all things to all people". Indeed, the history of the social capital idea is amazing. The current extensive research on social capital sharply contrasts with the long neglect of social aspects in the development theory. Until the 1990s, the major theories of development held rather narrow, often even contradictory, views of the role of social relationships in economic development. In the 1950s and 1960s, for example, modernization theory regarded traditional social relationships and ways of life as an *impediment* to development (Woolcock 2000:).

48. Neo-classical and public choice theories – the most influential in the 1980s and early 1990s – assigned no distinctive properties to social relations per se. These perspectives focused on the strategic choices of rational *individuals* interacting under various time, budgetary and

legal constraints (Woolcock, 2000: 77). In short, in economics the term has been ignored during the heyday of neoclassical economics and rational choice theories because it involves ideas difficult to handle in these frameworks: trust, norms of reciprocity, networks, civic engagement, and formal and informal rules or institutions. So the idea of social capital – the explicit statement that social relationships positively matter - is certainly important both in theory and policy improvement in development thinking.

49. Nowadays, the term is used in sociology, economics, political science and other social sciences and is used in nine primary fields (Woolcock and Narayan 2000): families and youth behavior; schooling and education; community life (virtual and civic); work and organizations; democracy and governance; collective action; public health and environment; crime and violence and economic development.

50. The common term usage allowed us to bridge orthodox divides among disciplines, on the other hand it may lead to confusion since many various aspects and elements are used under the umbrella of social capital:

“the point is approaching at which social capital comes to be applied to so many events and in so many different contexts as to lose any distinct meaning.” (Portes 1998: 2).

51. It is now clear that social capital is a multidimensional term:

- *Scope* of social capital (the level or unit of analysis);
- *Forms* of social capital (the elements into which social capital may be decomposed);
- *Sources* of social capital (actors and situations where social capital comes from), conceptual framework;
- *Indicators* of social capital (tools of social capital measurement);
- *Outcomes* of social capital and (effects of various social capital forms on well-being);
- *Channels* of social capital (ways through which social capital affects well-being).

Scope of social capital (the level or unit of analysis)

52. First, we must consider different units or levels of social capital analysis. It is often distinguished between micro, “mezo” and macro level (Grootaert and van Bastelaer 2002: 5-6). The micro level is usually associated with Robert Putnam (1993), who defined social capital as networks of *individuals* or households, and the associated norms and values that create externalities for the community as a whole. Coleman (1990) is called upon as a proponent of “mezo” analysis as he implicitly considered relations among *groups*, rather than individuals. He also expanded the concept to include not only horizontal but also vertical associations. The macro view of social capital is the most encompassing. In addition to the largely informal, and often local, horizontal and hierarchical relationships of the first two concepts, this view also includes the macro-level formal institutional relationships and structures such as the political regime, the rule of law, the court system, and civil and political liberties. The seminal works of this view are those by institutional economists Douglass North (1990) and Mancur Olson (1982).

53. In my opinion, I find another division more important, namely the level where the *benefits* of social capital are considered. There are two main conceptualizations of social capital. I will call them “**private concept of social capital**” or “**public concept of social capital**”, respectively”¹⁷.

54. The private concept of social capital was systematically elaborated for the first time in the work of Bourdieu (1985) and earlier texts of Coleman (1988, 1990). Pierre Bourdieu defined the concept as:

“the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance or recognition” (Bourdieu 1985: 248).

55. This approach is based upon a common aphorism “It’s not what you know, it’s **who** you know”. Here, social capital is understood as individuals’ or groups’ access to favourable personal networks and quantity and quality of connections to potential helpers. It consists of contacts through which one maximizes the financial and human capital one already possesses. Relatives, friends or associates constitute an asset that can be called upon in a crisis or need and used for a material gain.

56. In this view, social capital belongs to each *individual*, at times at the expense of others. It focuses on the benefits accruing to individuals by virtue of participation in groups and on the deliberate construction of sociability for the purpose of creating this resource. Also a group of individuals (e.g., a business firm) can possess social capital collectively. In the private concept of social capital, however, possession by a collectivity is quite different from the concept of possession in the „public“ usage. Here social capital is understood as a sum of the network connections held by group members (e.g. firm’s employees). After Bourdieu and Coleman a number of both theoretical and empirical analyses of private concept of social capital have been published (for review see Portes 1998).

57. As the concept of private social capital is in particular associated with sociological tradition and Bourdieu, the invention (or more correctly *re-invention* as shown above) of public social capital is attributed to the political scientist Robert Putnam and his article “*Bowling Alone: America’s Declining Social Capital*“ (1995). He defined social capital as a property of communities and nations rather than individuals:

“Social capital refers to features of social organization, such as trust, norms, and networks, that can improve the efficiency of society by facilitating coordinated actions” (Putnam 1993:167).

58. The idea of social capital as a kind of public good immediately received huge attention. Once a rather narrow term of social capital was used to explain many questions at regional and national level. Now we may say that the public concept of social capital outweighed the private concept though it still has a very important role especially in the field of social stratification. Usually, however, social capital is taken as a capacity for collective action or something that “allows individuals, groups and communities to resolve collective problems more easily” (OECD 2001a: 41) or as the often cited definition of the World Bank says:

„Social capital refers to the institutions, relationships, and norms that shape the quality and quantity of a society’s social interactions... Social capital is not just the sum of the institutions which underpin a society – it is the glue that holds them together. (World Bank 1998a)

Forms of social capital - deconstructing SC

59. Various things are encompassed under the umbrella of social capital. For any discussion it is necessary to decompose social capital into several elements and then to analyze their interdependence. Uphoff (2000:3) considers how primitive our understanding and use of natural resources would be if we did not make any distinction between renewable and non-renewable resources, lumping together forests, petroleum, fisheries, minerals, soil and genes as if they were all basically the same. By the same token, he argues that two basic distinct forms of social capital are to be distinguished (Uphoff 2000).

60. **Structural social capital** facilitates information sharing, and collective action and decision-making through established “roles, rules, precedents, procedures as well as a wide variety of networks that contribute to cooperation”. As such, it is a relatively objective and externally observable construct. **Cognitive social capital** refers to shared norms, values, trust, attitudes, and beliefs. These elements rationalize cooperative behavior and make it respectable. Structural social capital assets are extrinsic and observable, while cognitive social capital assets is a more subjective and intangible concept.

61. Social capital is thus understood as a combination of role-based or rule-based (structural) and mental or attitudinal (cognitive) elements. These two categories of social capital are highly interdependent as each form contributes to the other but they are distinguishable.

62. The two forms of social capital often go, but not necessarily, hand in hand. For example, the cognitive social capital created by the repeated social interaction in a sports association (such as trust, team cooperation or reciprocity) can survive the end of the sports season and have lasting effects among, and even beyond, the original members (Grootaert and van Bastelaer 2002: 7). Below I will discuss two most important elements of social capital elements – networks (as an element of structural social capital) and trust (as an element of cognitive social capital). Networks – bonding, linking, bridging

63. Networks, i.e. patterns of social exchange and interaction that persist over time, are widely regarded as one of the most important elements of social capital, be they formal or informal. There are two main dimensions about networks (Cullen and Whiteford 2001: 9-10):

- **Horizontal** - reflecting ties that exist among individuals or groups of equals or near-equals; and
- **Vertical** - stemming from hierarchical or unequal relations due to differences in power or resource bases.

64. The horizontal aspects of social capital can either bond or bridge groups, while the vertical aspects link groups with power, access, and resource differentials.
Sources of social capital

65. Typically, the idea of social capital is associated with civil society. A civil society consists of the “groups and organizations, both formal and informal, which act independently of the state and market and promote diverse interests in society” (World Bank 2003). Putnam (1993) claims that voluntary associations and networks produce trust and other “externalities” that benefit all other sectors of society including the state and the market. Voluntary civic associations are “schools of democracy” where social and civic skills are fostered.

66. However, there are of course many other sources of social capital than voluntary associations. Trust and networks is built (and potentially lost) at families, schools, local communities, firms and public sector. Families are the primary building blocks for social capital. They create norms and social ties, provide social networks that benefit its members. Schools, too, can support cooperative attitudes and values as well as provide a “meeting place” where various social networks can intersect. It also goes without saying that local communities, neighborhoods and friends are of particular importance to social capital.

67. The idea of firms as both a source and a “consumer” of social capital is of a much earlier nature. As we will see, innovation is increasingly dependent upon networks and collaboration linking together suppliers, customers and researchers. Indicators of social capital

68. As with the whole concept, measuring social capital is not easy either. Much of what is relevant is tacit and relational. For instance, it is very difficult to measure how people interact and relate to each other. Individual attitudes (e.g. trust) or behavior (e.g. voting) provide proxy measures of social capital, but we are at risk of confusing sources, outcomes and forms of social capital.

69. Typically, social capital measurement focuses on trust and levels of engagement or interaction in social or group activities. Robert Putnam (2001) has designed a Social Capital Index, which aggregates results from various social capital indicators to predict an overall community level of social capital. This index includes:

- **Community organizational life**
Civic associations per 1,000 population
Mean number of group memberships per capita
- **Engagement in public affairs**
Voter turnout in national elections
Attendance at town/school public meetings
- **Community volunteerism**
Number of nonprofit organizations per 1,000
Mean number of times did volunteer work last year
- **Informal sociability (e.g. visiting friends)**
- **Social trust (reported levels of interpersonal trust).**

70. Although the measurement of social capital is still in its very infancy, measurement instruments are being intensively developed. Based on experience with the multitude of social capital indicators in the case studies, Grootaert and van Bastelaer (2002: 31-32) suggest that the focus should be on three types of proxy indicators of social capital: membership in local associations and networks, indicators of trust and adherence to norms, and an indicator of collective action:

- **membership in local associations and networks.** Using membership in local associations as an indicator of structural social capital consists of counting the associations and their members and measuring various aspects of membership (such as internal heterogeneity) and institutional functioning (such as the extent of democratic decision-making). Which associations to include in the indicators is culture-specific: agrarian syndicates could be relevant in one country, rotating credit and savings associations in another, parent-teacher associations in yet another. In the case of networks, which are less formal, the key information is the scope of the network and the internal diversity of membership;

- **indicators of trust and adherence to norms.** Measuring trust and adherence to norms (cognitive social capital) requires asking respondents about their expectations about and experiences with behavior requiring trust. Key questions relate to the extent to which households received or would receive assistance from members of their community or network in case of various emergencies (loss of income, illness);
- **collective action.** The provision of many services requires a collective action by a group of individuals. The extent to which this collective action occurs can be measured and is an indicator of underlying social cohesion (at least to the extent that the cooperation is not imposed by an external force, such as the government).

71. As proxies, these three types of indicators measure social capital from different vantage points. Membership in local associations and networks is clearly an input indicator since the associations and networks are the vehicles through which social capital can be acquired. This indicator resembles perhaps most closely the use of years of schooling as a proxy for human capital. Trust can be seen as an input or an output indicator or even as a direct measure of social capital depending on one's conceptual approach. Collective action is clearly an output indicator.

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