Culture, cognition and knowledge-based development

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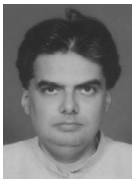

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Abstract

Purpose – *The purpose of this article is to provide a theoretical critique of the concept of the knowledge-based development.*

Design/methodology/approach – *A cross-disciplinary critique is discussed.*

Findings – *Provides cross-disciplinary analysis and critique of the concept of the knowledge-based development.*

Originality/value – *This paper provides a deeper analysis of the knowledge-based development and proposes a broadening of the current paradigm on the economic development by integrating psychological and anthropological points-of-view.*

Keywords *Design and development, Culture (sociology), Cognition*

Paper type *Conceptual paper*

1. Perspectives on development

The concept of ''development'' is deeply rooted in evolutionary epistemology of the social scientific discourse. Western social thinkers tend to interpret ''development'' in the socio-economic systems in an evolutionary perspective (Siebers, 2003). Evolutionary theory has influenced many social theorists to speculate that the developments in the social and cultural systems are subject to the general evolutionary causes (White, 1949; Childe, 1982; Harris, 1997; Havilland, 1999). They have explained the socio-economic progress of the human societies in a linear and causal fashion corresponding to the change in the material and technological conditions. The ''development'' in socio-economic systems was perceived to be the reflection of the material growth of the human societies. Karl Marx developed this thesis into full-grown social philosophy of change and the economic growth. His notion of the economic development was based on the concept of dialectical materialism and constituted a direct critique of the classical political economy. The classical theories of the economic development, though competitive and evolutionary in outlook had not given much credence to the social contexts of wealth, capital and labor relations. He wrote in his book, *Capital*, about the linear growth of the capitalistic economic development in these words:

> One capitalist always kills many. Hand in hand with this centralization, or this expropriation of many capitalist by few, develop on an ever-extending scale, the cooperative form of the labor process, the conscious technical application of science, the methodical cultivation of the soil, the transformation of the instruments of labor into instruments of labor only usable in common, the economizing of all means of productions by their use as the means of productions of combined, socialized labor, the entanglement of all people in the net of the world-market, and with this, the international character of capitalist regime (Marx, 1974, pp. 714-715).

In Marxist analysis labor, capital and means of production were interpreted in a ''socialized'' context. The social inequalities of the economic development created a class-consciousness among the proletariats. This proletarian consciousness, through a

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revolutionary class struggle would eventually lead to the establishment of a ''classless'' communist society. The formation of a ''classless'' communist society was a logical corollary of the capitalistic economic development and final stage of the social development of capitalism. At this stage all private property would stand abolished. The wealth would be owned ''socially'' for the welfare of the citizens. The Marxist critique was a clear rejection of the classical political economy of profit, competition and the free markets. The leading proponents of the classical and the neoclassical economics, such as Adam Smith, Ricardo, Marshall, Keynes and lately the monetarist Milton Freidman have interpreted the economic development as a rationally driven market phenomena. They have presented us with an ''evolutionary'' interpretation of the economic development, which was inspired by the utilitarian values of enterprise, competition and freedom to create more and more wealth. The Keynesian growth models, being an only exception to this ''free'' market economic philosophy, nonetheless emphasize that:

> Actively pursued and directed policies can accelerate the pace of growth and development. That governments can, and should, push development faster than market forces (Harrison-Ezeala, 1996).

The classical and neoclassical theories of the economic ''development'' moved into a new historical phase when the western societies embarked upon the massive colonization of the Asia, the Africa, and the Latin America during eighteenth and nineteenth centuries. They established their political control on the natural and agricultural resources of these continents and started utilizing the raw materials from these regions in order to run the newly established factories and industries of the west. This colonial contact between the industrializing west and the agricultural economies of the world gave a new dimension to the political economy of ''development'' wherein a large majority of the world population became increasingly ''dependent'' on goods and products of the western industrial machine. This industrial ''dependency'' caused uneven economic transformation of these traditional societies and created large scale social and economic disparities with a ''dependency'' attitude towards the modern economic development (Norman, 1985). The economic ''development'' in the material conditions of these traditional economies was achieved at a very high social cost. The economy, ecology, society, politics and morality of these traditional societies came under severe challenge by the western views of the world (Apffel-Marglin and Marglin, 1996).

After the second world war global community saw the rise of ''socialist'' model of the development. This model was legitimized by the totalitarian communist ideologies of the former Soviet Union, the Eastern Europe and the China. It was imitated in major parts of the Asia, Africa and Latin America by the socialist politics of leaders like Nasser, Castro, Nehru and Bhutto. For a number of decades, millions throughout the world considered the ''socialist'' model to be a real cure for the unequal economic and social development ills caused by the capitalism. The end of the cold war, nevertheless, witnessed a triumph of the liberal democracy throughout the world and a cul-de-sac to the absolutist philosophy of communism. Vaclav Havel has summed up the spirit of the new age in the following words:

> The fall of communism can be regarded as a sign that modern thought based on the premise that the world is objectively knowable, and that the knowledge so obtained can be absolutely generalized . . . has come to a final crisis . . . It is a signal that the era of arrogant absolutist reason

> is drawing to a close and that it is high time to draw conclusions from that fact (cited in Apffel-Marglin and Marglin, 1996).

This absolutist reason should remain in check so that the notion of the economic ''development'' becomes more relevant to the larger populations of the world (Apffel-Marglin and Marglin, 1996). At this moment, the entire methodology of development and its underlying epistemology needs to be examined and reinterpreted in a ''pluralist'' and ''multiple'' way. Culturally and morally sensitive methodology should replace the existing ''evolutionary'' and ''developmentalist'' approaches. This can help outdo the existing perceptual barriers in different cultures towards the global economic development (Lipset and Smelser, 1966; Nisbet, 1970; Siebers, 2003; Felbinger and Robe, 2001).

The World Bank President (up to 31 May 2005) James D. Wolfensohn has also underscored this shift in the notion of the development and says:

> It is the totality of change in a country that matters-Development is about putting all the component parts in place-together and in harmony.

He goes on to reflect:

> Too often we have focused on the economics, without a sufficient understanding of the social, the political, the environmental and the cultural aspects of the society (Ellerman and Armington, 1998).

The diversity of human cultures require a holistic and socially sensitive perspective on the development, which also take into consideration the critical relationship of human values and their impact upon the global economic development. Wilfred (1997) has commented that the concept of the development is inextricably linked with the ''value-orientations of the social scientists and the conceptions of the development to which they variously subscribe''. He has also remarked that study of the development can not be fully objective and ignore the respective, ''values-orientation and ideological constructs of its practitioners''. Wilfred (1997) comments:

> First are they disciples of Jesus, Mohammed, Confucius, Adam Smith, or Karl Marx? Second do they identify with the poor, the rich, or the middle classes? Third are they elitist, technocratic, populist in orientation? Fourth do they believe that authentic development is achievable under capitalism, socialism, or a social market economy?

The followers of the spiritual and moral traditions such as Christian, Muslim or Chinese may like to interpret the development from their broader collective spiritual centers. On the other hand; a westerner may interpret the development as a linear competitive growth (Stewart, 1986). The Marxist may hope to ''socialize'' entire activity of the development and free it from the capitalist divisions. The difference in their perceptions about development can be attributed to their unique worldviews. Thus, a need has emerged to reformulate the notion of the development and place diversities and multiplicities of the worldviews and local knowledge into the center of current debate on the issue. It is suggested that the existential reality of the human agents as a source of knowledge and good be integrated into the development discourse coupled with a sensibility of the social scientists and policy makers to respond to the divergent interpretations of the concept itself (Wilfred, 1997; Fitz-Enz, 2003; Siebers, 2003; Martens, 2004; Novellino, 2005).

2. Contexts of knowledge-based development

Development of human societies has generally been a concern of the economic science. The focus of development effort has been, ''to improve human well-being and to enable human beings to achieve their potential'' (Wilfred, 1997). The concept of ''well-being'' can have different connotative and emotive significance for its users. The reasons for cognitive differences regarding the interpretations of ''well-being'' have been underscored by the economist Amartya Sen. He comments:

> There are many fundamentally different ways of seeing the quality of living, and quite a few of them have some immediate plausibility. You could be well off without being well. You could be well, without being able to live the life you wanted. You could have got the life you wanted, without

> being happy. You could be happy, without having much freedom. You could have a great deal of freedom, without achieving much (Wilfred, 1997).

This shows clearly that mental states at times shape the social behavior of the human beings (Ward, 2002). Statements such as, ''I am well'' or ''I hate terrorist'' reflect cognitions about persons and situations of which one is not fully aware. This largely determines and conditions the individual reactions and interactions. At other moments, it is the other way round. The human beings learn from their culture how to react to an elderly person, help a poor man and play a game (Shore, 1996). Charity, sharing food or playing a game are all culturally imprinted values. It can be safely stated that culture and cognition shape the behavior of the individuals living in the groups (Stark, 1958; Berland, 1982; Hofstede, 1991; Loasby, 1999; Radding, 1985; Gregg, 1974).

Cognition and culture go hand in hand in shaping the attitudes and actions of the people and are intrinsically unique to each socio-cultural system. Edward C. Stewart (1986) in his study, ''The Japanese model of modernization: present and future'' has written about this. He says:

> An old distinction between east and west can be put to good use in searching for the center of gravity of Japanese culture. In the west the center of identity tends to be organized on a materialistic basis, and displays a sharp distinction between self and non-self. In the east and particularly in Japan, the sense of self is diffuse, existing in reciprocal relations between self and others, resembling a center of gravity or a polarized field of forces, and dissimilar to the thing-like qualities of the western self.

In his study of a manufacturing organization in the southwest Tokyo, Stewart (1986), finds out that even the acceptance of a US imported safety system for the plant was related to the core ''spiritual center'' of Japanese identity. The way individuals conceptualize about the reality, construct knowledge and do work at the plants, are closely interconnected with their cultural values.

Paye (1996) and Vickery (1999) have spoken about the rising tide of globalization of the world economies and interaction of the human values and cultures through ICT revolution. This has brought a growing realization on part of the leaders, social scientists and policy makers to understand the cross-cultural exchanges and redefine the ''development'' paradigm. Knowledge-based economic development has emerged as a strong area of both research and application for the socio-economic uplift of developing countries (Ellerman and Armington, 1998; Carrillo, 2003). The UN Global Compact, the World Bank and EFMD's'' Globally Responsible Leadership Initiative are radically restructuring their core values and epistemological assumptions to meet the growing challenges of the knowledge driven global economic development and multiple social needs of the human communities. The active role of human agents and their unique cultural and psychological identities have been given a new significance in the ongoing development discourse (Haucap, 1998; Ellerman and Armington, 1998). It is, therefore, contended that the effective knowledge-based development strategy should be ''humanistic'' and incorporate within its theoretical framework three crucial and interconnected domains of knowledge. These are:

- A reinterpreted economic paradigm which views economy more as a ''knowledge communication system'', driven by flexible information markets of ''global economy'' (Martens, 2004; Castells, 2000).
- A reinterpreted psychology that integrates non-western views on self and cognition, when designing a knowledge-based development program (Siebers, 2003).

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- A reinterpreted cultural, ethical and ecological viewpoint that considers equivalence of the non-western cultural and moral philosophies and their contribution towards a humanistic notion of the development (Stewart, 1986; Haucap, 1998).

The significance of the human factor in the global economic development processes can no more be ignored. The global successful application of the knowledge-based development strategy is closely tied with the cultural, the ecological, the economic and the ethical pluralities of the human communities. The knowledge-based development strategy can play a fundamental role in the social transformation and the economic development of the underprivileged communities, if the former is well integrated with the cultural values of the people. This constitutes a profound task and perhaps the most critical challenge of this age. This challenge can be responded to by deploying the K-based development strategy, which is structured around the humanistic synthesis of values and technology. The humanistic synthesis between values and technological change becomes a utopia when people conditioned by centuries of cultural training and cognitive fixity take up extreme standpoints on the issue. This situation is further complicated because of the serious global disconnect and socio-economic disparities prevalent among the human societies (Schaeffer, 2002). These difficulties can be overcome by an intelligent synthesis of the soft side of the KBD (human beings as the creators of values and knowledge and ultimate end of social good) with the hard side of the KBD (information and communication technologies). The core value of this synthesis lies in harnessing the social capital, which would be the engine of growth for the nascent knowledge-based development strategy, as James Konzes in his book, *The Leadership Challenge*, has remarked:

> The new currency won't be intellectual capital. It will be social capital-the collective value of whom we know and what we will do for each other. When social connections are strong and numerous, there is more trust, reciprocity, information flow, collective action, happiness and by the way, greater wealth (cit in Lesser and Cothrel, 2004).

Computer-based communications technologies can only enhance the social capital (Lesser and Cothrel, 2004; Buchel, 2001). The externalities generated by the social capital via social interaction can have economic effects and can contribute towards the economic development of the societies (Collier, 2002). Likewise, human communities appear to be the repositories of the immense social capital, particularly in the Asia, the Africa and the Latin America, where people are predominantly inspired by the traditional world views, such as religion, mythology and folklore (Siebers, 2003). Knowledge-based development should develop an applied framework of socio-economic strategies, which shows sensitivity to the cultural diversities present in these societies. The cultural sensitization of the K-based strategies can not only intensify the role of social capital in the economic development, but also help the underdeveloped regions of the world to be true beneficiaries of the global explosion of the knowledge economy. The presence of necessary information networks is a prerequisite for the relevant application of the IT enabled knowledge-based development strategy in these societies. Paul Armington (Ellerman and Armington, 1998) has suggested that:

> The idea is to use the information-gathering capabilities of modern information technologies (IT) to strengthen social organization (as opposed to predatory governmental structures) and simultaneously to increase the ability of local government to provide worthwhile public goods and services.

The rapid interactive powers of IT can enable the local governments to dissolve the local cultural and psychological barriers to the K-based development and broaden the participatory base of the communities. This can improve immensely, the decision making and problem resolution competencies of the local governments. The public accessibility of the K-based development resources can effectively integrate the emotions, aspirations and wisdom of the human communities and place them at the core of the implementation plans. The problems encountered during the implementation phase of the K-based development which may include; issues of autonomy, cognitive dependency and branded learning of the development knowledge, can only be managed by the policy makers and leaders if the

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knowledge necessary to engage in the development efforts is not ''given'' but ''appropriated by the local counterparts'' (Ellerman and Armington, 1998).

Four important areas can be identified, where the IT enabled knowledge-based development, can bring a real social transformation in the developing countries of the Asia, Africa and Latin America. These are:

1. Public administration and governance.
2. Rural and urban development.
3. Transport management.
4. Quality of life and work.

The public administration has assumed a new significance in the wake of globalization; efficient, responsible and accountable governance to the people has become need of the hour. The e-governance tools can enable administration system to be much broader and cost-effective (Caldow, 2002). The non-developmental expenditures of the developing countries are mostly incurred by the large and corrupt bureaucracies, who cannot deliver to the people. The cost of maintaining the large government structures have led to the fiscal deficits having crippling effect on the productive sectors of the developing economies. This calls for a systematic restructuring of the governance particularly at the local government levels. Mansell and Wehn (1998) have suggested that:

> ICTs have considerable potential to cut administrative costs through reorganization of internal administration and through alternative provision of services.

The underprivileged communities of the developing countries can be provided with community-based information tools and networks, which can help them, reach to the administrative facilities without spending much and getting their local problems solved at the local administrative level. The administrative injustice can be promptly dealt with the readily accessible community-based information networks. The advantages of community based information networks can be multiple. Mansell and Wehn (1998) have pointed out that:

> Remote areas can be served by cellular telephones, satellite services, and laptop computers and the range of benefits potentially available to citizens include social security, pensions, unemployment payments and public assistance.

It is, therefore, obvious that efficient e-governance tools can expand the scope of the archaic administrative machineries and reduce their financial costs.

ICTs can also help improve the transport management and revenue collections of the developing nations. UNCTADs' advanced cargo information system (ACISC) and automated customs data (ASYCUDA) are fine examples of this. Quality of life and work (Birch and Paul, 2003) is another key area where the knowledge-based development can be of great help to improve the standards of living in the developing countries of the world. Diagnostics, disease management and mass literacy are also vital areas where, the knowledge-based development can transform the underprivileged communities and uplift their social and economic status. The K-based telemedicine, teleradiology and distance learning can leverage the benefits of IT for the social welfare and economic uplift of the poor

at their doorsteps. HIV/AIDS, infant mortality, hunger and drought can also be managed around the globe by using the advanced IT networked knowledge resources on medicine, agriculture and epidemiology. The natural disasters such as earthquakes, tsunamis and floods can be monitored and averted by an effective integration of the global knowledge into the regional and the national information systems of less developed and developing nations of world.

The interpretation of knowledge can be ''social and intuitive'', ''representational and structural'', ''conjectural and objective''. It is varied and divergent due to the unique cultural and epistemological contexts of its users (Nonaka and Nishiguchi, 2001; Beissner *et al.*, 1993; Dartanall, 2002; Popper, 1962). The notion of ''development'' may also be perceived differently because of the unique nature of the ethical values and social sentiments of the diverse human populations (Wilfred, 1997). Yet one conclusion is obvious; ICT and globalization offers for the first time, a real springboard for both the leaders and policymakers to spread benefits of the ''knowledge'' and the ''development'' to the underdeveloped regions of the world. It also offers a hope for the poor to exercise their natural right to ''choose'' and be ''free'' from hunger, disease, illiteracy and dependency. Sachs (2005) presenting economic possibilities to end the global poverty has suggested the following:

> Economic efficiency requires that the knowledge available should be for all, to maximize the social benefits of the knowledge.

While correlating the development economics in terms of the social benefits to community, Sachs proposes differential diagnosis and K-based strategies for the poverty reduction. According to Sachs:

> Many people take for granted that poverty and wealth are simply a reflection of societal values. A society (Japan) was viewed as doomed to poverty when foreigners first arrived in 1870.

In 2006, how much western wealth has found an Oriental habitat, is an open guess. Similarly, in the wake of 9/11, Islamic societies have been categorized by some western observers to be unfit for the modernization. Sachs (2005) suggesting a solution writes that human reason based on culture and cognition can still be harnessed-through science, non-violent action, and historical reflection-to solve the basic problems of social organizations and to improve human welfare. Economist, Kenneth J. Arrow (1995), has underlined the challenge in the following words:

> The intuitive issue is the following. How do we rank the opportunities available to an individual – the opportunity sets, in Paretos' terminology? One principle universally accepted among the philosophers and ethicists (but not necessarily by psychologists) is that adding new opportunities cannot worsen the choice. In technical language, if one opportunity set is a subset of another, the latter must be at least as good (not necessarily better). What deeper ethical argument underlies this self-inclusion principle?

In the end, it is stated, that KBD should not be turned into another KM package to be delivered by the international and national experts on development; rather, as underscored by Kenneth J. Arrow, it should create new opportunity sets for the impoverished citizens of the developed and developing countries in helping them to rise above their ignorance, poverty and suffering.

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