

**Human capital development  
for Pakistan in emerging  
global market:  
An application of social  
capital matrix approach**

**Syed Akhter Hussain Shah  
and  
Musleh-ud Din**

# Introduction

- Human capital development mainly takes place in three ways 1) learning by doing (experience) 2) education (formal and or informal) 3) training (formal and or informal).
- A plenty of literature may be referred for example work of [Becker (1964, 1975, and 1993), Romer (1986), Lucas (1988), Barro, and Lee (1997 and 2000) Barro (1999a, 1999b and 2000) Barro and Sala i Martin (2004), Hanushek (1997 and 2000) and Krueger and Lindahl (1999)]

# Introduction.....

- Social capital influence human capital at two stages one at decision making for investment in human capital, second for getting returns from already accumulated human capital. Social capital is accumulated with investment of time and money in different forms between individuals and society etc. Social capital is accumulated in different dimensions amongst individuals, group, organization, institutions and state. Shah (2007)

# Human capital development theory

- Romer (1986) and Lucas (1988) incorporated human capital as a major growth element.
- Lucas (1988) argues that “despite its deep study by the economists, still many of its aspects are considered unexplored”
- Romer (1990 b) in his empirical work says that different from conventional theory his finding is that the initial level of literacy also helps to explain subsequent rate of investment, in human capital and thereby the subsequent income growth

# Human capital augmentations with social capital

- Human capital may reconcile with social capital in two ways: one at investment stage when individual makes decision that how much resources are to be allocated as an investment for accumulation of human capital. Individual's decisions regarding investment in human capital up to certain level and quality of human capital to be accumulated is influenced from social capital of individuals.
- Secondly, social capital affects decision making as well as getting returns from given level of human capital. social capital may affect returns to society and economic growth at state level.

# **Human capital augmentations with social capital.....**

- Investment of resources in human capital as pointed out by Shah, Hamdani and Ahmed (2006) that investment in and accumulation of human capital thus may be related in a way to total time endowment and money to be utilized either to invest in other activities or in human capital.
- Most of ethnic groups encourage their respective ethnic group members to get more education etc. Borjas (1992)

# **Human capital augmentations with social capital.....**

- Coleman (1988) demonstrates that more than just human and financial capital is required for children to succeed in school. According to this view, the values, communities, friends, and contacts (social capital) need to reinforce the perception of benefits of investing in education (human capital) Patrions (1996)

# Human capital augmentations with social capital.....

- Robinson and Flora (2003), acknowledge that individual utility-maximizing behavior cannot be pursued independent of the well being of others. Social capital is a powerful resource that makes our choices interdependent.
- Knack and Keefer (1997), in accounting economic growth found a positive relationship with social capital
- Human capital variables disaggregating the labor input helps some, but aggregate production functions still leave a lot unexplained  
.Schmid (2003)



# Human capital augmentations with social capital.....

- social capital, make democracy work, make production rise and make the societies we live in cohesive. Cox (1996)
- Grootaert and Bastelaer (2002, p.4) define social capital as “the institutions relationship, attitudes, and values that govern interaction among people and contribute to economic and social development.
- Return from a given level of human capital are reinforced from social capital as Putnam (1993) observes that effective collaboration in institutions require interpersonal skills and trust, but those skills and that trust are also inculcated and reinforced by organized collaborations

# Human capital augmentations with social capital.....

- Carroll (2001) has expressed that social capital is the trust, reciprocity, and norms and networks of civic engagement in a society that facilitate coordinated action to achieve desired goals. Similarly returns from human capital are also affected from “cognitive social capital” that comprises more subjective and intangible element such as generally accepted attitude and norms of behavior, shared values, reciprocity and trust.

# Human capital augmentations with social capital.....

- Grootaert and Bastelaer (2002) highlight that Social capital effects economic development mainly by facilitating transactions among individuals, households, and groups in developing countries. This effect can take three forms. First, participation by individuals in social networks increases the availability of information and lowers its cost.
- “Social capital is important when firms and person known to each other agree to share the costs and benefits of a joint venture. It influences the willingness to divert resources away from the production a private good to the production of a joint good”. Robinson and Hanson (1995)

# **Human capital augmentations with social capital.....**

- James (2000) noted that many a time firms in different societies make economic decisions dominated by their social system and even discriminate labor force despite their potential level.

# **Human capital development in open economy: A social capital matrix approach.**

- The allocation of resources in social capital is made by an individual to carry out different activities such as interaction and reciprocity with individual, group/community, institution/organization, and state.
- Shah (2007) individual develops reciprocal relationship based on time and monetary transaction and exchange or reciprocity with other individuals or group or state. The reciprocity is in the form of exchange of emotions, feelings, sympathy, help and financial assistance etc. enable an individual and societies accumulate social capital.

# **Human capital development in open economy: A social capital matrix approach.**

- Sobel (2002) “social capital operates like gift exchange, taking advantage of social capital creates an obligation to honor future requests for assistance and increases the value of an individual’s connections”
- Shah (2007) returns may not be equal to investment in one and the same period rather the short fall is conceived as an investment that gives returns in future time periods.

# Continued .....

- Investment of resources for accumulation of human capital and social capital among more number of individuals, group of people, organization/institutions and state may expand base of social capital that enable to get higher level of returns from human capital

# Social Capital Matrix /Dimensions of Social Capital in open economy

- 
- Here
- $i = 1 \dots 4$  (Individual, Group/Community, Institution/organization, State)
- SiD = Domestic stake holders
- SiF = Foreign stake holders

stakeholder	Sid	Sif
Sid	Sid vs Sid	Sid vs Sif
Sif	Sif vs Sid	Sif vs Sif



## Dimensions of Social Capital in an Open Economy ;

Stake holders Domestic Foreign	Individual	Group/Comm unity	Organization/i nstitution	State
Individual	Individual vs Individual	Individual vs Group/Comm unity	Individual vs Organization/i nstitution	Individual vs State
Group/Comm unity	Group/Comm unity vs Individual	Group/Comm unity vs Group/Comm unity	Group/Comm unity vs Organization/i nstitution vs	Group/Comm unity vs state
Organization/i nstitution	Organization/i nstitution vs Individual	Organization/i nstitution vs Individual	Organization/i nstitution vs Organization/i nstitution	Organization/i nstitution vs state
State	State vs Individual	State vs Group/Comm unity	State vs Organization/i nstitution	State vs state

# Individual domestic Vs Individual foreign.

- Individual as an entity allocates resources (time and money) for learning to interact, then interaction and reciprocity with other individuals etc. Social capital is accumulated between an individual through his interaction and reciprocity with another individual.
- Coleman (1990) points out that “social capital constitutes a capital asset for the individual...it consists of some aspect of social structure and facilitates certain action of the individuals who are within the structure

# Individual domestic vs. group/Community foreign

- Interaction between individual and group or community members by allocation of resources (time and money) accumulates social capital.
- Robinson and Flora.(2003), Individuals and groups can consciously work to strengthen it (social capital).
- Groups are facilitated by individuals across borders

# Individual domestic Vs Institution/Organization foreign

- Interaction between individual and institution or organization through their members by allocation of resources (time and money) accumulate social capital. Individual makes investment through interaction and reciprocity with other institution or organization etc. that accumulates social capital.
- As institutions sought individual affiliation across borders to secure their interest and expand their business.
- So its always a bargain going on, where stake holders interact to sell/buy the services of others at a present value discounted benefit vs. cost analysis at all time

## Individual domestic vs state foreign

- Interaction between individual and state or its institution or organization through their members by allocation of resources (time and money) accumulates social capital. Individual makes investment through interaction and reciprocity with state directly or indirectly through its institutions or organization etc. that accumulates social capital which develops their reciprocity and trust in each others.
- Cognitive social capital and structural social capital facilitates patterns of their interaction with each other

## Group/ Community domestic vs. Group/Community foreign

- Interaction of group/community with other group or community by allocation of resources (time and money) accumulates social capital among them.
- Robinson and Flora (2003), Individuals and groups can consciously work to strengthen it (social capital)
- Woolcock (1998) physical capital and human capital are essentially the property of individuals, while social capital and extension inheres in groups.

## Group/Community Domestic Vs Institution/Organization Foreign

- Interaction of group/community with other institutions or organizations by allocation of resources (time and money) accumulates social capital among them. Castle (2003) and Sobel (2002) have pointed out existence of social capital among groups due to common interests. Woolcock (1998) interprets that social capital is property of group.

# Group/Community domestic Vs State foreign

- Interaction between group or community and state or its institution or organization through their members by allocation of resources (time and money) accumulates social capital
- Beall (1997) views that in many respects the interactions between state and civil society around urban services in Faisalabad had more in common with the vertical networks Putnam (1993) described for southern Italy.



# Institution/Organization domestic Vs Institution/Organization foreign

- Interaction between institution/organization and other institution/organization directly or indirectly through their members by allocation of resources (time and money) accumulates social capital.
- In the emerging global markets its very practical and brings synergy impacts to both the countering partners. E.g. in the global financial and capital markets where global funds are now Developed. A foreign bank ABC striking a deal of its funds placement in Pakistan funds market through XYZ domestic bank.

# Institution/Organization domestic Vs State foreign

- Allocation of resources (time and money) is made between institution or organization and state or its institution or organization for interaction through their members accumulates social capital.
- Individuals directly or indirectly on behalf of institution or organization make investment through interaction and reciprocity with state directly or indirectly through its institutions or organization etc. that accumulates social capital which develops their reciprocity and trust in each others

# Continue...

- Because of the sheer volume of potential benefits the institutions can deliver to the other state or individualistic social capital investments towards representatives of other states bring potential economic transactions. E.g. cultural/commercial visits and meeting the influential persons of the other state

## State domestic Vs State foreign

- The interaction between two or more than two states by allocation of resources in the form of money or other type of help, assistance or cooperation exchange or reciprocity accumulate social capital among states.
- The accumulated social capital is used as a means to returns in future time.
- Both the countries build social capital by means of cultural, economic cooperation and exchange. They can invite or place trade fairs, export technology which would further create demand for their products and thereby build social capital which is based on economic and other interests

$$y_i = \alpha_0 + \alpha_i x_i + \alpha_j x_j + \alpha_k x_k + \varepsilon_i$$

$$y_i = f(x_i, x_j, x_k, x_l)$$

where

$y_i = \text{Earning}$  where  $i = 1 \dots n$

$x_i = \text{Demographic variables}$  where  $i = 1 \dots m$

$x_j = \text{Conventional Human Capital variables}$  where  $j = 1 \dots z$

$x_k = \text{Social Capital variables}$  where  $k = 1 \dots p$

$x_l = \text{Other variables}$

# Data and variables

- As this is a relatively new approach, hence data is not available from conventional sources like PIEHS, PRHS etc. However, Hamdani (2000) have produced a survey data which includes these non-conventional variables. For the statistical analysis the study uses cross-section primary data as no secondary data on social capital and human capital and economic behavior (cross section or time series) are available in Pakistan

# Results

- We estimated the equation using simple OLS methodology.
- The equation thus estimated came out to be
- Household Earning = 33191.611 – 8699.649  
Sex + 477.740 Own education -1273.079  
Experience + 27.165 Experience square –  
275.959 Experience part time – 473.845 Friends  
Office + 492.959 Friends Social + 400.956  
Friends Game

# Results

- The results from the social capital variables are interesting and significant. Increase in number of official friends lead to a significant decrease in the potential earnings of household. This could be due to the fact that in this economy there is a governance issue which is established in many earlier research works. Further the concept of social capital requires a potential bargain and increase in welfare for both the encountering agents, but in this case it's a casual type of association, which might be based on routine matter correspondence and casual time pass which neither increase productivity or earning potentials.



# Results

- Contrary to that increase in social friends significantly increases the earning potential of the household. This is a strong conclusion as it leads to establish the need for developing social capital.
- Another positive but less significant result is that numbers of friends by virtue of sports increase the earning potential..

## **Conclusion**

- Augmented human capital with social capital affects individual's decision making process of resource (time and money) allocation for investment to accumulate the former. Similarly social capital also positively affects returns from human capital. An expanded base of social capital along with human capital may lead to more efficient resource allocation by individual, group of individuals and community, organization/institution, and state. Social capital matrix developed in an open economy identifies more dimensions of social capital that increases returns from augmented human capital to individual, group/community, organizations and state.

# Policy recommendations

- Therefore efficient resource allocation may be made by individual, group/communities, organization/institutions and states simultaneously at the levels of foreign individual, group/communities, organization/institutions and states for accumulation of augmented human capital with social capital. This investment in human capital may accumulate more social capital that give higher returns. This model may be replicated in formulation of labor policy, trade policy, investment policy and foreign policy at national level.

»THANKS you