

Investing in Social Capital for Transforming Income Growth: Towards Theory of Responsiveness in Energetic Hospitals for Benchmarking

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Abstract

Objective: The study aimed to determine the strategic role of social capital in the organization and its relationship with employees' professional behavior and economic development, and also identify the factors encouraged by social capital and their role in achieving economic progress in the organization. *Design and Setting:* Multiple entity with an observation based longitudinal study design with repeated measurement in 22-months follow-up procedures adapted in the National Capital Region, Delhi, India. *Participants:* Stratified sample of 381 respondents to include representation of the full multi-specialty hospital at each unit, including the broader network of health care professionals, clinicians, nurses and health service managers involved in implementation. *Measures:* A combination of paper-based and semi-structured questionnaire includes 90-item scale was administered. *Results:* The results of the study hold several important implications for understanding the impact of social capital measures on economic development and broader theory surrounding the effect of satisfaction and cooperation improved the efficiency, effectiveness and equity. This is due to the kind of interventions that are taking place in the studied hospitals as part of change management initiative. In the analysis, the range of professional behavior factors found to be significant predictors, with higher ratings of the availability and the extent of reported process monitoring being associated with positive development in performance, reviewing and enhancing performance, providing direction, updating knowledge, stabilizing workforce, embracing change and innovation. The extent of process of social capital measures such as efficiency and effectiveness were found to have stronger effect, with every one point increase in social capital and its related characteristics score associated with a 0.616 higher scores in economic development. *Conclusion:* The study concludes that organizational culture and climate are capable of infusing social capital and its related characteristics are possible, multiple complex process and factors are implicated.

Keywords

Social Capital, Benchmarking, Trust, Norms, Networking, Efficiency, Effectiveness, Quality

1. Introduction

In the modern world, competition is so intense and change is so hurried that any competitive edge gained by the induction of technology or service engineering process can be short-lived if the organizations do not value their people's social relations. The most successful organizations will be those that manage social relations in the most effective and efficient manner. Organizations place more and more emphasis on developing and retaining the employee's relation and interaction -i.e., social capital. Business is increasingly recognizing the importance of investing on

'social capital' now more than ever. The relationship between people in organizations and businesses is an important and essential asset, which contributes to growth in a similar way to human and physical capitals. Thus, social capital is a concept that recognizes people who should rather be treated and preserved as assets.

Kenneth Arrow¹ in his paper "observations on social capital", stated that the term "capital" implies "extension of time; deliberate sacrifice in the present for future benefit; and alienability". The Petri's Index seems to be correlated with Putnam's measures of social capital, such as trust². Bourdieu³ defines it as the capital of social connections, mutual acquaintance and social recognition. Putnam,

Leonardi & Nanenetti⁴ define social capital as those “features of social organization, such as trust, norms, and networks that can improve the efficiency of society by facilitating coordinated actions”. Fukuyama⁵ refers social capital as, “the ability of people to work together for common purposes in groups and organizations”. Further, Fukuyama⁶ defines social capital as a “...set of informal values or norms shared among members of a group that permit cooperation among them”. Pennar⁷ opines that “the web of social relationships that influences individual behavior and thereby affects economic development”. The World Bank has adopted a definition of social capital very close to that of Putnam and colleagues⁴: “Social capital is not just the sum of the institutions, which underpin a society; it is the glue that holds them together”. Although all definitions refer directly or indirectly to social connections/networks as elements of social capital, the Putnam definition points to the role of social capital as a catalyst of coordination/cooperation, an essential device to achieve better (social and/or economic) outcomes.

Increasing evidence shows that “social capital” is critical for organization to prosper economically. The last decade has registered with impressive amount of economic studies aiming to test the ability of different aspects of the social structure, often grouped under the common umbrella of social capital, to exert a positive influence on the economic performance^{8,9,10,11,12,13}. The past studies have used social capital to explain various associations with socio-economic outcomes. According to Semih Akçomak¹⁴, by reducing transaction costs, creating new forms of information exchange and influencing behavior through norms, higher social capital induces innovation. The empirical findings suggest that innovation works as a transmission mechanism that translates social capital to economic growth. Social capital induces more innovation by (i) reducing transaction costs such as monitoring costs, (ii) creating new forms of information exchange, and (iii) regulating selfish behavior by instilling group norms. The findings reveal that social capital directly affects income growth and also has an indirect effect through innovation.

Social capital becomes tautologically present whenever an outcome is observed^{15,16}. Of course, from a lexical point of view, it is possible to attribute the “social capital” label to every aspect of the economy’s social fabric providing a favorable environment for production and well-being. Considering social capital as a productive factor, Heller¹⁷, Ostrom¹⁸ and Rose¹⁹ point out that social capital contributes to economic growth by facilitating collaboration between individual interests towards the achievement of increased output. Several studies^{20,21,22,23,24,25,26,27} have discussed about the features of social capital and its contribution to economic growth.

Knack & Keefer⁹ and, Temple & Johnson¹⁰ provide the evidences that high levels of trust and social participation are positively correlated with economic growth, after controlling other growth promoting factors. The growing literature claims that repeating trustful interactions in the economy do sediment in higher levels of generalized trust. This

aggregated stock of trust is treated as input in the aggregate production function²⁸. Scholars like Miguel²⁵, Mogues and Carter²⁹, Rupasingha et al.,³⁰ Ravichandran et al.³¹ found that there is a relationship between the stock of social capital and its relation to economic development.

As argued, the general social capital investment includes professional behavior that will enhance efficiency and effectiveness^{32,33}. However, the concept of ‘social capital’ has received considerable attention in the healthcare industry as a determinant of effectiveness, efficiency and quality of healthcare. Drawing upon industry experience and review of emerging measures in this area, social capital in the present study defined as those of organizational culture that impact on social relations, including managerial and organizational behavior, trust, workplace norms, and networks^{34,35}. It is therefore postulated that social capital leads to greater organization’s performance which leads to effectiveness, efficiency and quality of health care – i.e., economic development. Nonetheless, this study aims to assess the relationship between social capital and its characteristics on economic development.

The two-fold purpose of the current study is, relating to the question of what impact the change management initiative¹ had upon social capital in participating hospitals and the reason thereof. First, to determine to what extent does social capital create impact on healthcare organization’s economic development. Second, to understand the role of range of contextual factors in ‘social capital’ that research suggests are important for economic development and quality improvement. Despite a large volume of descriptive studies, few studies have assessed the relative importance of social capital and its related factors upon longitudinal change in an organization.

2. Methods

2.1. Study Design and Methodology

The study aimed to determine the strategic role of social capital in the organization and its relationship with manager’s professional behavior and economic development, and also identify the factors encouraged by social capital and their role in achieving economic progress in the organization. An observation based longitudinal study design was adapted to conduct this present study. The study was carried out in National Capital Region, India connected with more number of hospitals pathology processes, super-specialty setups and extensive outpatient services are managed by trust run, corporate base, private players and public sectors with multi-facets health financing mechanisms. The study conveniently chose multi-specialty hospitals from each selected

¹ As part of change management initiatives, the studied hospital initiated various programme improve the social capital such as orientation programme, refresher courses, capacity building, skill enhancement activities, motivational and innovation training, creation grievance redresses cells/committee, leadership management, auditing and competency acquisitions did evolve a benchmarking process for a growth.

management run model with criteria of having 500 beds.

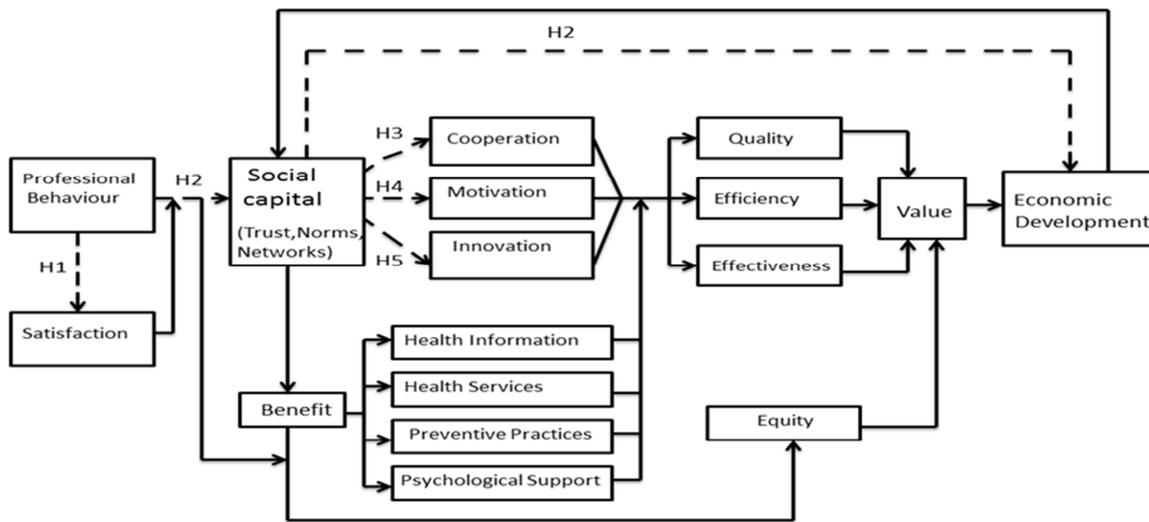


Figure 1. Framework on social capital and its related measures effectiveness

The research design focused upon five different categories namely – a government hospital, a private hospital, a trust-run hospital, a charity-based hospital and a chain-based hospital in Delhi, India and comprised of units with repeated measurement at two points. The first time-point (January 2013 – May 2014) corresponded with the end of the structural data gathering phase and the second time-point was taken for desk-research (June – October, 2014). The interval between time-points represented the period over which it was expected that participating hospitals would implement, spread and consolidate the social capital measures².

We also obtained aggregate financial data from January 2013 to October 2014 during the change management process to see the effect of inducted social capital and its related measures’ outcomes on economic return. An organizational performance is generally assured at the level of hospitals’ trust; data were aggregated at this level. The present study defines, a trust is a single or group in a defined service point area operated by the same management team³⁴.

In addition to investigation, variables were entered into conceptual framework (Fig-1) to causal and temporal priority, informed by prior research and theory as outlined above. Fig-1 depicts the current study conceptual model, which gives rise to the following specific hypotheses:

[1] Organizations will have significant professional behavior and improved employees’ satisfaction level.

[2] Professional behavior will influence the social capital and perception of economic development.

[3] Social capital comprises of trust, norms and networks will influence cooperation and collaboration among individuals within and across the organization.

[4] The presence of social capital and its related degree of a range of precondition factors will influence motivation among individual and organizational characteristics.

[5] Variation in range of social capital measures will influence innovation once variance attributable to individual and organizational factors that are expected to lead economic development.

2.2. Instruments and Data Analyses

Eight instruments include a demographic questionnaire were used to fulfill the study objective. Affiliation was measured thru the ‘job choice exercise’ which consists of 30 constructs includes trust, faith, power, work place environment and growth. Reliability of the constructs and its related process were established thru cronbach’s alpha (0.791) for the consistency. A second method for measuring the ‘professional behavior’ of respondents was used with 10 constructs includes communication, feasibility, relationships etc. These construct strength the motivation for autonomy, authority and decision making etc. Test-retest reliability established at 0.754 and it was anticipated the two instruments might measure different concepts. While quality and economic practices such as empowering employees, decentralization, knowledge management etc were assessed via 10 questions, as perceived by respondents. Internal consistency has been illustrated using cronbach’s alpha 0.754.

However, respondents’ job satisfaction examined using 10 questions with 5 items described positively, while 5 items scored negatively. Internal consistency reliability was demonstrated using cronbach alpha of 0.856. Individual cooperation examined using 10 sources such supervisor support, feed-back mechanism; administrative support, growth and opportunities etc scored 1 to 4. The higher the score, the greater the indication of cooperation. Validity has been assessed thru cronbach alpha of 0.783. Innovation construct consists of 10 statements on 4-point scale with opportunities, technology adaption, and ideas management.

²As part of change management initiatives, the studied hospital initiated various programme improve the social capital such as orientation programme, refresher courses, capacity building, skill enhancement activities, motivational and innovation training, creation grievance redresses cells/committee, leadership management, auditing and competency acquisitions did evolve a benchmarking process for a growth.

This construct has demonstrated internal consistency of alpha 0.673.

Finally, the patient satisfaction evaluation questions were developed with 80 constructs about the hospital management; care giving process, care-giver behavior, skills and competency of the service providers, health financing mechanisms were measured thru 5-point scale - poor to excellent. Reliability of the constructs and its related process were established thru cronbach's alpha (0.749) for the consistency.

2.3. Participants and Data Collection

Due to organic nature of the hospitals, pre-specification of individuals for inclusion was not possible. Instead, sampling was stratified according to criteria (senior, middle and lower class) defined by the researchers to include representation of categorized hospitals at each unit, including the broader network of health care professionals, clinicians, nurses and health service managers involved in implementation of social capital measures. A combination of paper-based and semi-structured questionnaire was used for data collection. In total, 381 responses (of senior class (manager's, doctors, supervisors), middle class (nurses, midwives, technicians) and lower class (services)) were returned at the first time point with an estimated rate of 52% individuals that met the inclusion criteria from 761 personnel's in the study categorized hospitals (Govt-60; Trust-108; Charity-110; Chain-based-58; Private-45). Second time point, desk-research consists of library survey and stakeholders' interviews carried out to validate the hypotheses.

2.4. Measures

A 90-item survey questionnaire was administered at the first study time-point, including varied scales designed to measure a range of individual characteristics, organization behavior and social capital measures. The survey questionnaire items employed likert response scales and were developed based upon pilot research in the first phase. Further scale quantified into a series of factors in terms of the degree of professional behavior, satisfaction, cooperation, motivation, innovation and economic development (Table-1). The items displayed high internal reliability and were aggregated into an overall composite measure of social capital (Cronbach's Alpha = 0.783). In addition to the survey, a stakeholders' interview and data relating to organization structures and its related performance were assessed.

2.5. Analysis

Data were analyzed thru Statistical Packages for Social Sciences (SPSS), using descriptive statistics and correlation techniques. Mean score was created for all studied constructs and statistical significance was established at 0.05 level, unless otherwise noted. Social capital measures - professional behavior, satisfaction, cooperation, motivation, innovation and economic development - were tested using correlation approach. The subsequent research hypotheses were tested

using inferential statistics, as determined by Pearson correlation technique.

3. Finding and Analysis

The main findings relating to the study hypotheses are summarized below (Table-2). The main characteristics of the 381 respondents that comprised in the study are described. In order to investigate hypotheses, change in social capital and its related measures were noted using a repeated measures" test. The change in social capital was statistically significant ($P < 0.05$) with a small effect size from 0.740 to 0.024 (31.8%) while there was significant ($P < 0.05$) association with individual characteristics which varies in the rate of change including professional behavior (48.1%), innovation (63.2%), satisfaction (61.2%), motivation (54.4%), cooperation (53.6%). But score was slightly lower for economic development (45.7%; $P < 0.05$) when rate of change is considered.

The study Hospitals have shown significant professional behavior and accounted for improved employees' satisfaction level with the correlation co-efficient of 0.168 ($P < 0.05$) (Hypothesis-1). Neither long term association nor pay structure was found to be significant factor. In order to examine the effect of professional behavior in terms of competence and competency upon economic development (Hypothesis-2) was detected at the $P < 0.01$, perceptions were added and found to be variant 0.371. Subsequently, the effect of a range of social capital measures such as trust, norms and networks relating cooperation and collaboration for overall work culture of organization and its associated behavior was investigated (Hypothesis-3). The addition of precondition factors accounted for a small additional proportion of the variance (27.7%), but this effect did reach statistical significance ($P < 0.05$).

A series of motivational factors relating to individual and organizational characteristics were collectively accounted for 54.4% of the variance in the social capital measures and found to be significant ($P < 0.01$) (Hypothesis-4). Examination of the influence specific social capital measures revealed that innovation to support the organization growth and development, and between economic development (Hypothesis-5) and the extent of process innovation found to be significant ($P < 0.05$). The extent of process of social capital measures such as efficiency; effectiveness and quality were found to have stronger effect, with every one point increase in social capital and its related characteristics score associated with a 0.616 higher scores in economic development (Table-2). Expression of the positive significant correlation between social capital and economic development means with the increase or decrease in the social capital, organizational economic development will also decrease or increase.

The analyses of financial data show that despite variations in investment in the level of infrastructure and equipment, it was clear that ratings of hospitals' staff on being treated with respect and dignity, staff working together and being

involved with decision about hospitals’ growth and development, and care were significantly associated to trust and norms with economic development (spearman $p=0.661$, $P<0.05$). The proportion of staff willing to recommend their hospitals for any kind of health services to the patients, including referral and follow-up care also associated with

networking ability which lead to income growth of hospitals (spearman $p=0.654$, $P<0.05$). There is also variability between growths and profits generated by the hospitals in the last three years (Fig-2), which may reflect different levels of social capital measures among staff or of levels of branding and promotion by hospitals.

Table 1. Descriptive Statistics of Social Capital and Its related measures

Variables	N	Mean	SD	Most Extreme Differences P (+) N(-)		Percent change	Asymp. Sig. (2-tailed)
Social Capital	381	3.245	0.985	0.024	-0.740	31.8	.029
Trust	381	3.625	0.983	0.504	-0.358	71.3	.031
Norms	381	3.274	0.993	0.173	-0.719	41.5	0.024
Networks	381	3.530	0.231	0.384	0.299	77.8	0.504
Satisfaction	381	3.231	0.622	0.064	-0.391	61.2	0.073
Professional Behaviour	381	3.210	0.539	0.016	-0.329	48.1	0.038
Cooperation	381	3.171	0.471	0.056	-0.300	53.6	0.064
Motivation	381	3.197	0.454	0.014	-0.257	54.4	0.016
Innovation	381	3.318	0.287	0.049	0.031	63.2	0.056
Economic Development	381	3.224	0.396	0.079	-0.172	45.7	0.014

Table 2. Correlation among Social Capital and its related measures

variables	Professional behaviour	Social capital	Trust	Norms	Networks	Satisfaction	Cooperation	Motivation	Innovation	Economic development
Professional behaviour	1									
Social capital	0.674*	1								
Trust	0.259*	0.142*	1							
Norms	0.548*	0.781*	0.860*	1						
Networks	0.277*	0.653*	0.938*	0.767*	1					
Satisfaction	0.168**	0.679**	0.368*	0.724*	0.699**	1				
Cooperation	0.109*	0.796*	0.901**	0.613**	0.405**	0.631**	1			
Motivation	0.794**	0.804**	0.796**	0.726*	0.258*	0.364**	0.121**	1		
Innovation	0.206**	0.617*	0.945*	0.681*	0.149*	0.140**	0.518*	0.271*	1	
Economic development	0.371*	0.416*	0.661*	0.504*	0.756**	0.418*	0.187*	0.397*	0.654*	1

* Correlation significant at 0.05 level

** Correlation significant at 0.01 level

In order to understand the impact of social capital and its differences among the studied hospitals by professional behavior, motivation, cooperation, innovation and economic development, the study examined the correlation of those score with other indicators (Table-2). Considering the social capital measures – norms, trust and networks has significant correlation with economic development and/or income growth of the hospitals (Fig-2). For instance, Government Hospital has recorded reliable scale of positive networking (50.0) and trust (19.6) over profits in growth followed by charity-run hospital has registered with input and output, that naturally extracted from the trust (18.2) and networking (42.3) measures. While, private hospital and chain-based hospital relied on input measures of norms and trust indicating internal communication was important but not as important as the networking during the intervention. Ratings of income and profit growth found to be significant among all the studied hospitals, though variation found to be exist due to organic nature of the hospitals. This reflect the different pattern in operational mechanism and differential styles of functioning adapted by the studied hospitals including strategies, features, relational behaviors and general

likeability.

4. Discussion

The study revealed a modest but statistically significant relation in social capital and its related measures which were expected to spread, embeds and consolidate the perceived economic development in the hospitals. It additionally reported that both the individual characteristics of social capital and perception of a range of professional behavior, motivation, and innovation factors perceived economic development in the hospitals. The results of the study hold several important implications for understanding the impact of social capital measures on economic development and broader theory surrounding the effect of satisfaction and cooperation improved the efficiency, effectiveness and equity. This is due to the kind of interventions that are taking place in the studied hospitals as part of change management initiative – orientation programme, refresher courses, capacity building, skill enhancement activities, motivational and innovation training, creation grievance redresses cells/committee, leadership management, auditing and

competency acquisitions did evolve a benchmarking process for a growth.

In terms of individual characteristics, the role of motivation in the study hospitals was to create a desire and willingness to perform in the manner in which [hospital] management wants to get the work done. It was the distinct from the competence and competency, i.e., capacity to work. Yet in another way it was defined as a force that gave rise to certain professional behavior and influences the behavior to do a thing. In other words, motivated employees of the

hospitals are changing work place and its related culture.

Motivation process in the study hospitals started with the identification of physiological or psychological deficiency and it was considered to be perceived needs such as good superior-subordinate relationship, social relations among the staff, work group, opportunity for growth and personnel development and working conditions that activated behavior toward improved job satisfaction and professional behavior. This resulted in the employees' enhanced performance and productivity.



Figure 2. Impact of Social Capital Measures On Economic Development

In the analysis, the range of professional behavior factors found to be significant predictors, with higher ratings of the availability and the extent of reported process monitoring being associated with positive development in performance, reviewing and enhancing performance, providing direction, updating knowledge, stabilizing workforce, embracing change and innovation. It is well established concept that professional behavior is the most important area of an

organization and perhaps getting the supreme priority. The study hospitals adopted a bottom-up collaborative approach for setting professional behavior to align the job-description, mission, goals and objectives, which by default helps in evolving the right economic perspectives and perception while focusing on patients' satisfaction, people management and job satisfaction.

Social capital is defined as the act of trust, norms and

networking and its related factors moral, social behavior norms and perception. It can also be described that developing intellectual and moral faculties, especially through innovation, the study found largely its relevance in those who have their creativity and focused on continuous learning. The study hospitals included quality circles which encompass the person-centered approach, the structural approach and the relationship approach. The person-centered approach focused on the development of both social competence and fosters cooperation and a general intellectual

competence that promotes innovation. While inducted structural approach in the hospitals reintegrated segregated work sequences and attempted to decentralized decision-making. Conversely, the relationship approach was employed to benefit team development, role negotiations, and feedback methods. Thus a planned and managed social capital and its related characteristics certainly improve organizational efficiency, effectiveness and equity through focused innovation.

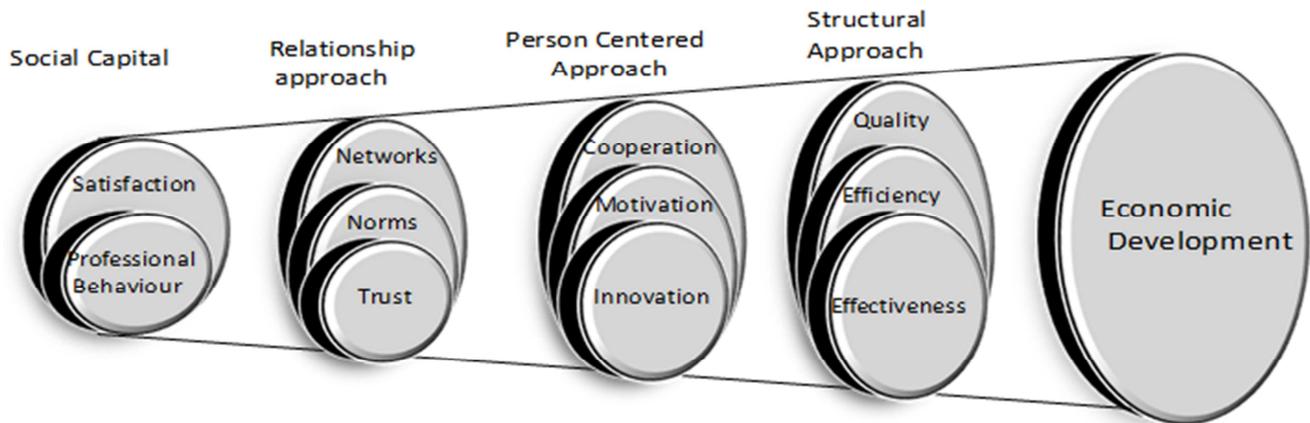


Figure 3. Approaches to Economic Development thru Social Capital.

The extent of process of social capital measures such as efficiency and effectiveness were found to have stronger effect, with every one point increase in social capital and its related characteristics score associated with a 0.416 higher scores in economic development. Improved economic condition i.e., increased productivity can be achieved by increased position of social capital and its related characteristics. The small but significant improvement in economic development and its related perception among employees detected in this study suggests of modest impact of social capital upon its related characteristics including organizational culture and climate. Conversely, with improved conditions on social capital and its related measures will have significant impact on quality of services, which might lead to excellence?

Taken at face value, the study's findings would suggest that context is not as important as intuition might lead us to believe. Moreover, it is important to note that the findings do not lend support to organizational development theories and readiness for change which suggest that certain social capital and its related measures as preconditions should be in place for successful engagement in improving quality and economic performance. However, social capital – trust, norms, values – i.e., changing attitudes and motivations are now the major issues before the organizations. Through appropriate innovation in professional behavior and in organization culture ensure quality of work life, keeping pace with the changing human expectations. To infuse additional changes, the study Hospitals administered the strategy of promoting quality circles and developing the organizational climate of total participation, cooperation and collaboration

thru the person centric-, structural- and the relationship-approaches to infuse additional gain in the economic development (Fig-3). As we also know that, on the other hand, quality circles can be related to increased employee motivation, participation, involvement and productivity and, hence economic development.

The social capital in its virtual form accounted for a relatively large proportion of the explained variance in organizational culture and climate scores is of further interest. Imparting professional behavior and value laden attitudinal changes organizations needs to invest on social capital and its related measures to improve the productivity and quality, which have, until recently, been neglected by health system research and health care services that have favored outcome in the present study. The benefits of social capital in health sectors may flow to the individual through a number of pathways^{32,33}. First, social capital diffuses information within the organization, and in turn improves knowledge of health and thus leads to health promotion. Second, social capital provides opportunities for quality care services, preventive practices and psychosocial support, which if accessed, will tend to reduce stress and health care burden at individual and family level³². Third, social capital tends to reduce the health care expenditure and expected to improve the healthcare financing at organizational and society level³³.

The study financial data demonstrate that social capital and its related measures significantly correlated with hospitals' performance, which is reassuring since it is likely that they are overlapping but resulted in differential outcomes and achieve about 80 per cent potentiality during the study period. Although the method of building trust, norms and networking

skills and capability may vary from one setup to another, we also see that there are advantages of new form of communication for rebuilding trust, norms, and networks mechanisms that penetrates higher income and profits, which let robust estimates of quality and economic performance.

5. Conclusion

The findings of the study clearly state the positive correlation between social capital and economic development. The study also highlights the challenges that the hospitals face in improving social capital and its related measures to increase efficiency, effectiveness, and quality. The study also suggests that while organizational culture and climate are capable of infusing social capital and its related characteristics is possible, multiple complex process and factors are implicated. Further, research to understand the determinants of social capital for successful health promotion and organization climate and the constituents of a conducive, local organizational context for improving productivity and equity would be required. Finally, the findings advocate that less investment and less effort may be required to bring in small change in social capital and capability organizational and health system level. Therefore, organization shall plan to infuse social capital for not only for the economic gain but also ensure that it remains in competitive nature and has long lasting positive change for survival. Social capital and its related characteristics ensure health promotion and well-being of patients and customers.

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