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THE IMPACT OF SOCIAL CAPITAL ON EXPLORATORY INNOVATION ACTIVITIES

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ABSTRACT

The inadequate use of social capital to improve exploratory innovation activities is a phenomenon observed amongst countries within the world. The previous literature states that social capital enhances the exploratory innovation activities. However, identification of the factors which enhance the effectiveness of the relationship at the individual level is limited. Hence, in response to the social capital theory and social network theory, this paper attempts to examine the effect of social capital and exploratory innovation activities by explaining network perspectives of social capital. The cross-sectional survey was conducted covering 250 managerial level employees employed within the IT sector. The network perspectives of social capital: Bonding, Bridging and Linking social capital was measured through structured self-administered questionnaire and was analyzed using Structured Equation Modelling through AMOS 21. The empirical data identified that the influence of network perspective social capital on exploratory innovation activities is positive and significant. Thus, the current study recommends in order to take the maximum advantage of the available social capital, the Managers must pay attention to the nature and strength of the networks.

Key Words: Social capital, Exploratory innovation activities, Bonding social capital, Bridging social capital, Linking social capital

1. Introduction

Inability of a country to maintain growth rates in exploratory innovation consistent to the growth in social capital rate is a tendency that is being discovered within the world. This identifies that the social capital within those countries has been underutilized. Exploratory innovation is defined as the “discovering, creating and pursuing new knowledge and products and catering to the new markets” (Jansen et al., 2006, p.1662). Based on the Global Innovation Index (2019), Sri Lanka has maintained a constant amount of exploratory innovation, indicating no improvement over the last three years. However, the Prosperity Index (2019) states that Sri Lanka has upgraded its social capital by nineteen positions over the last decade. Based on these statistics, it could be stated that though the social capital of the country has improved, exploratory innovation activities has not been improved. This indicates the existence of underutilization of social capital.

In identifying the reasons behind the lack of exploratory innovation activities when there's adequate social capital available could be the individual level factors since exploratory innovations at a higher level originate through the activities of the individuals (Yan & Guan, 2018). The relationship between social capital and exploratory innovation activities is established in prior literature at organizational level (Li et al., 2016; Sheng & Hartman, 2019). However, the factors which could affect exploratory innovation activities at the individual level in current literature is limited (Yan & Guan, 2018). In identifying the individual factors, Ceci et al. (2019) emphasize that the influence of network perspectives of social capital on exploratory innovation has been overlooked. Thereby, the current study seeks to examine the effect of social capital on exploratory innovation activities by explaining the network perspectives of social capital.

In understanding the theoretical background, the social capital theory clarifies how individuals, groups and organizations will engage on handling the relationships to access the tangible and intangible resources (Li et al., 2016). Further, it has been identified the extent to which individual has access to the resources to facilitate exchange of resources through social capital depends on the strength and quality of the individual's networks (Bhandari & Yasunobu, 2009). This could be theoretically reorganized by drawing the social network theory. Therefore, the network perspective on social capital introduced by Putnam (1993) and Woolcock (2001), was used in the current study.

The current study makes several empirical and managerial implications. Empirically, the current study confirms the impact of network perspectives of social capital on exploratory innovation activities. Further, it will attempt to extend the innovation at individual level (Anderson et al., 2018). Practically, it will guide on the initiatives which should be taken in terms of network configurations to improve exploratory innovation activities.

The rest of this paper is organized as follows: The section two will review the literature in relation to the exploratory innovation activities. Section three describe the research methodology is outlined. The next section the discusses the results of the study. Finally, the implications of the study are presented along with the conclusions and future directions.

2. Literature Review

The exploratory innovation is considered as an innovation strategy in the available literature (Phelps & Paris, 2010). The exploratory innovation activities consist of distant, constant and extensive search of new combinations and opportunities (Yan & Guan, 2018). Further, it constitutes with discovering of new approaches to the processes and business which diverse from the existing procedures amongst the dynamic environments.

The impact of social capital on exploratory innovation activities was established through few empirical studies at organizational level (Li et al., 2016; Sheng & Hartmann, 2019; Yan & Guan, 2018). Li et al. (2016) emphasizes that the interactions amongst the individuals will be enable them to identify the problems properly and arrive with appropriate solutions. As a result, they will be able to identify the new opportunities and approach them which will result in exploratory innovations. Similarly, Yan and Guan (2018) states that the diverse and non-redundant knowledge that individuals earn through their relationship will enable them to create exploratory innovation activities. Thus, based on the aforementioned empirical evidence it could be stated that there is a relationship between social capital and exploratory innovation activities. Hence, the following hypothesis is advanced.

H1: Social capital has an impact on exploratory innovation activities

Social capital is usually interpreted as a multi-dimensional construct rather than a unidimensional construct. Manning (2017) validates stating that it is common in conceptualizing social capital to decompose it into several dimensions. The present study focuses on the implications of the network perspective of social capital on exploratory innovation activities.

The network perspective social capital consists of three dimensions of network perspective social capital namely, bonding social capital, bridging social capital and linking social capital. Bonding social capital is defined as “inward looking networks that tend to reinforce exclusive identities and homogenous groups” (Putnam, 1993). Simply, these relationships are maintained within the closest and known to each other (such as family members, close friends etc.). In contrast, Putnam (1993) defines bridging social capital as “outward looking and encompasses people across diverse cleavages”. Simply, this is related to the formation of connections within the individuals with different demographics, loose friendships, workmates etc. Furthermore, linking social capital is related with the relationships managed by individuals or groups with diverse social positions and power.

There are few studies within the available literature which will identify the effect of network perspective social capital on innovation (Bravo et al., 2019; Kraft & Bausch, 2018; Murphy et al., 2018). The bonding social capital will allow individuals to maintain the current status quo limiting the innovation activities whereas bridging social capital could improve innovation activities through upskilling the individuals through providing literacy and numerical skills (Murphy et al., 2017). Further, Kraft and Bausch (2018) states that both bonding and bridging social capital improves innovation using the concepts of network closure and structural holes. Thus, based on the previous literature it could be stated that network perspectives of innovation influence innovation activities.

In relation to the exploratory innovation activities, the current study asserts that the influence of bonding, bridging and linking social capital would positively influence on exploratory innovation. The bonding social capital will enable them in getting access to the resources (high quality tacit knowledge) which is available within similar networks whereas bridging social capital will provide access to the non-redundant information, opportunities and resources and encourage introduction of novel business models which could be considered as exploratory innovation activities (Bravo et al.,2019; Kraft & Bausch, 2018). Moreover, bridging social capital will facilitate experimentation by combining the resources from distant sources. This will enable opportunity recognition in innovation (Ceci et al.,2019). Additionally, linking social capital will provide more access to knowledge and innovative experiences and infrequent knowledge through the privileged connections which opens the opportunities for new production techniques and business models (Ceci et al., 2019). Hence, based on the above evidence and assertions the study argues that there is an effect of bonding, bridging and linking social capital on exploratory innovation activities though the causal relationship between the relationship is not clear. Therefore, the following conceptual framework is developed and hypothesis is advanced.

H2: Bonding social capital impacts exploratory innovation activities

H3: Bridging social capital impacts exploratory innovation activities

H4: Linking social capital impacts exploratory innovation activities

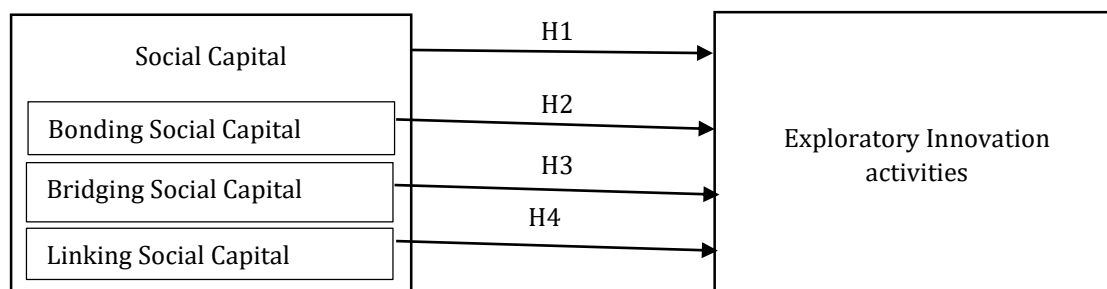


Figure 1: Conceptual Framework

Source: Author constructed

3. Methodology

The managerial level employees employed in the IT sector of Sri Lanka were the unit of analysis of the current paper. This sample is selected as the managerial level employees are more exposed and pressured engage in exploratory innovation activities and IT industry was renowned for knowledge intensive activities like exploratory and exploitative innovation activities (Berraies, 2019; Li et al., 2016). The responses were collected through a judgmental sample drawn from the population, as the non-probability sampling method could be employed in the absence of a properly established sampling frame.

The researcher distributed 306 structured self-administered questionnaires (Refer appendix 1 for the operationalization table) among the respondents where only 250 questionnaires were considered for the analysis of the study indicating a good response

rate of 81.6%. The IBM AMOS 21.0 was used to analyze data through Structural Equation Modeling (SEM).

4. Results and Discussion

Initially, the collected data was entered into the IPM SPSS 21.0 software where the raw data was treated for recognition of missing values and outliers. Within the data cleaning process, a demographic profile and multivariate assumptions were tested. The two-step method was followed in performing the SEM using AMOS 21.0 software. Thus, the measurement model and structural model were developed. Subsequently, the goodness of fit indices was used in measuring the model adequacy.

Based on the below table 1, all the hypothesis were accepted. Furthermore, through the structural models it was identified that all the relationships were positive and significant at the 95% confidence level.

5. Conclusion and Implications

The present study intended to examine the effect of social capital on exploratory innovation activities by explaining the network perspective social capital of the managerial level employees in the IT industry of Sri Lanka. The study found that influence of network perspective social capital on exploratory innovation activities was significant as well.

Based on the assumptions of the social capital theory and empirical studies the social capital does directly influence exploratory innovation activities (Li et al., 2016; Sheng & Hartmann, 2019; Yan & Guan, 2018). Confirming these, the present study identifies that there is a positive and significant relationship between social capital and exploratory innovation. This will support the postulation of the social capital theory.

Table 1: The hypothesis testing results

Path	Hypothesis	Beta value	P value	Decision
SC → EI	H1: Social capital has an impact on exploratory innovation activities	0.410	0.000	Accepted
BSC → EI	H2: Bonding social capital impacts exploratory innovation activities	0.161	0.019	Accepted
BrSC → EI	H3: Bridging social capital impacts exploratory innovation activities	0.201	0.000	Accepted
LSC → EI	H4: Linking social capital impacts exploratory innovation activities	0.153	0.012	Accepted

Source: Author (2021)

The current study identified significant positive relationships between bonding, bridging and linking social capital and exploratory innovation activities. Though direct evidence is limited within the present literature, these findings are in alignment with the findings of Bravo et al. (2019); Kraft and Bausch (2019) in innovation related literature. Validating these, the present study identifies that the impacts made by each network perspective of social capital do change on exploratory innovation activities. Accordingly, the bridging social capital and bonding social capital have a high influence on exploratory innovation activities. Conclusively, it identifies empirically that the strength and the nature of the relationships do have an influence on the effectiveness of the exchange of resources to facilitate exploratory innovation activities.

The present study provides theoretical and managerial implications. The present study contributes to the existing literature by providing theoretical background supporting social capital theory on the individual factors which improve the effectiveness of influence of social capital on exploratory innovation activities. Further, the current study theorizes the effect of network perspective of social capital on exploratory innovation activities which has been overlooked.

Practically, the current study provides insights to the managers on the individual level factors which will enhance the effectiveness of the relationship between network perspective social capital on exploratory innovation activities. The findings will guide the managers on the manner which they should manage their individual connections to enhance the exploratory innovation activities. Moreover, the statistics finds that the strength and nature of the network as a factor influencing the effectiveness of the relationship. The study identifies bridging social capital as the most influential network whereas linking social capital is the least influential network to improve exploratory innovation activities. The maintenance of social relationships nor the network is expensive as an individual needs to spend more energy and time. Thus, through the use of these findings the managers could focus on maintaining the most suitable network arrangement which is advantageous for the exploratory innovation activities.

In identifying the most suitable network arrangement, the managers could take some initiatives. First, managers require to understand to which extent that they have the particular relationship developed and limit it accordingly. Secondly, the managers need to request to the organizations to arrange or sponsor formal meetings (such as; trainings, knowledge sharing forums) and informal activities (such as; sports events, parties) which will expose the employees to variety of perspectives. Thirdly, managers should focus on improving the relationship skills of the employees to increase the employee's ability of use the connections avail within them. In addition, the HR practitioners could give the priority to the exposure and level of connections that the candidate would have as a selection criterion when recruiting employees to engage in exploratory innovation activities.

The conduct of the research within highly controlled environment, as only considering only the managerial level professionals in the IT sector is a limitation of the current study. Therefore, considering professionals and non-professionals in other contexts would be possible future direction of the study and it will solve the generalizability issues as well. Conclusively, the current study implies that social capital significantly influences exploratory innovation activities and these influences will change based on the nature of

the network that is present within the individuals. Finally, the present study highlights the importance of nature of network for the development of exploratory innovation activities.

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Appendix 1: The operationalization table

Construct	Dimensions	Source
Social Capital	Bonding social capital	Kouvonen, A.et al. (2006)
	Bridging social capital	
	Linking social capital	
Exploratory innovation activities		Mom et al. (2007)