The Impact of Relational Characteristics of Job Design on Social Capital

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Abstract

Social capital forms the most valuable asset in an organization, as it contributes to the development of the organization's human and intellectual capital. This research explores how social capital can be enhanced by job design. It investigates the impact of contact characteristics of job design—frequency of contact, duration of contact, and physical proximity—on social capital. The data were collected from 203 participants working in four bottled water factories operating in Saudi Arabia. The results indicate that frequency and duration of contact have a significant impact on social capital. This study contributes to the literature by providing empirical evidence about the impact of relational characteristics of job design on social relations in the workplace.

Introduction

The resource-based view of the firm considers humans to be the most vital resources to the organization, as they possess the knowledge that has a crucial impact on organizational performance. This is quietly seen in countries that are poor in natural resources but rely on their welleducated workforce to leverage their economies. This view point signifies a new economical shift to business factors that are of an intangible nature and not explicitly manifested in traditional accounting reports (Milenkovski and Blazekovic-Toshevski, 2022). These intangible resources are considered more strategic to organizational sustainability than tangible resources such as machinery, capital, and land (Paoloni et al., 2020). According to a World Bank report (2005), more than two-thirds of total global wealth comes from intangible assets. Thus, organizations' ability to compete in the modern economy is based on the utilization of their intangible assets (Inkinen, 2015). In fact, social capital has been the subject of much research on its role in leveraging organizational capital (Nahapiet and Ghoshal 1998; Tseng et al 2014; Mayo 2016). It is considered one of the organizational assets that has a key role in the development of both human and intellectual capital in the organization(Edvinsson and Malone, 1997; Leana and Buren, 1999). Its function is represented by its ability to facilitate the

sharing of ideas as knowledge becomes embedded in social relationships, as a dense social network allows individuals to access the expertise and knowledge of others more easily and quickly (Ahuja, 2000; Ganguly et al., 2019; Bhatti et al, 2020). This, in fact, is attributed to the role that social capital plays in enhancing the movement of resources in social networks through supporting the communication, coordination, and expediting of knowledge exchange among individuals in the organization. It is, therefore, considered one of the forms of assets that has a huge impact on the economic development of organizations (Murray et al, 2020). For this reason, several scholars have considered the investment in this type of asset to be crucial to organizational success (Edvinsson and Malone, 1997; Tseng et al., 2014; Mayo, 2016).

Literature Review

Social capital is viewed as a resource that stems from the interpersonal relationships among employees (Bolino et al., 2002). It bonds employees into a successful collective unit that benefits them and their organization (Dehsorkhi and Nazarzadehare, 2012). Social capital is defined as "sum of actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit" (Nahapiet and Ghoshal, 1998, p. 243). Based on the definition, it can be said that social capital consists of a set of individuals and a set of social ties that connect them and facilitate their interaction within a network of relationships (Wu and Tsai, 2005; Makela and Suutari, 2009; Steinfield et al., 2010). These networks of relationships constitute a resource that is different from other types of capital, as it facilitates access to the collectively owned capital (Nahapiet and Ghoshal, 1998). More importantly, social capital is considered to be stable, as it is not vulnerable to the impact of employee turnover. Rather, it is sustained by the mutual benefits that employees gain from their social ties. Therefore, it is of importance for organizations to identify the mechanisms through which they can promote social relations among their employees.

Most early studies, as well as more current ones, have indicated the significance of social capital as a key component of organizational intellectual capital (Edvinsson and Malone, 1997; Tseng et al., 2014; Mayo, 2016; Hamouche, 2021). Having said that, identifying the work structure that facilitates the formation of social bonds merits consideration. In fact, this has attracted several scholars to explore the role of management practices in the formation of employees' social ties. They emphasized the role of management practices in influencing employees' prosocial behaviors. For example, training was found to be a source of trustworthiness, as it provides confidence in coworkers' skills and knowledge (Youndt et al., 2004; Collins and Clark; 2003). Recruitment enables management to staff the organization with employees who have an inclination to cooperate and collaborate with others and to work in groups (Cabella et al., 2011; Chuang et al., 2013). Rewards are used to convey messages to the employees about how the organization values the behaviors of communication and interactions between individuals in the organization (Leana and Van Buren, 1999; Cabella et al., 2011; Chuang et al., 2013). Performance appraisals based on a team-based approach also inform employees about the importance of group work (Chuang et al., 2013; Collins and Smith, 2006).

However, the use of traditional human resource practices as a management tool to elicit such behaviors has been criticized by several researchers, as these practices lack the social considerations of the work structure (Gittell et al., 2010; Morris et al., 2005). The primary focus of traditional human resource practices is on managing employees in formal settings in order to strengthen their relationship with their organization for the purposes of attracting, retaining, and motivating employees at work (Lengnick-Hall and Lengnick-Hall, 2003). Consequently, organizations are unable to utilize the embedded resources in the social networks of their workforces to their greatest potential. Hence, researchers have advised organizations to shift the implementation of human resource practices to ones that consider the social characteristics of the workplace and their impact on the employees' social relations (Lengnick-Hall and Lengnick-Hall, 2003; Subramaniam and Youndt, 2005).). Zupan and Kase (2007) indicated that job design may have several attributes that contribute to employees' integration into their social networks. Additionally, they

found that these characteristics of job structure can facilitate employees' communication, interaction, and networking with their peers at work. Several theories have emerged to explain how job design affects employees' attitude. Among these is the theory of relational job structure developed by Grant (2007), which implies that jobs can be relationally structured to foster employees' social ties at work. The basic principle behind this concept is that the structure of the work can be shaped to facilitate communication between employees (Taylor, 2014). Hence, adding relational characteristics to a job will enable an organization to sustain the development of the social relations among its employees. Grant (2007) classified the relational job characteristics into two categories: impact and contact. In this study, we will focus on the contact dimensions of job design, as these dimensions are considered the mechanisms of social ties (Petroczi et al. 2007). Thus, the aim of this study is to investigate the impact of contact dimensions—frequency of contact, duration of contact, and physical proximity of contact—on the organizational social capital.

Frequency

Frequency of contact refers to the opportunities a workplace offers for employees to interact with each other (Massey and Kyriazis, 2007). These chances of contact have the potential to unveil the common interests and shared goals among employees, which in turn will lead to the development of emotional bonds that strengthen their relationships. Hence, frequency of contact can be seen as an enabler of the development of group rituals such as cooperation, collaboration, congruence, consistency, and accountability (Pan and Scarbrough, 1999; Gupta and Govindarajan, 2000). Moreover, frequency of communication promotes trust between dyads, as trust is considered to be one of the main components of social capital (Leana and Buren, 1999; Becerra-Fernandez and Sabherwal, 2001; Massey and Kyriazis, 2007). Trust has been found to increase the confidence between partners, employees' willingness to rely on one another, and a belief that a participant will not take advantage of another's vulnerability (Nicholson et al., 2001). Based on that, it can

be said that the more employees communicate with each other, the more familiar they will be to each other (Gittell, 2011). Thus, frequency of contact can be considered as a predictor of the strength of social relationships between employees in the workplace (Pi and Cai, 2017): when it increases, the social relations are considered strong, and when it decreases, the social relations are considered weak. Therefore, it can be argued that frequency of contact has an impact on social capital in the organization. This leads us to the first hypothesis:

H1: Frequency of contact has a significant impact on social capital.

Duration

Duration of contact refers to the length of time that the nature of a job offers to an employee to interact with other employees at work. The length of communication reflects the amount of personal information exchanged during the contact between the partners, which then supports the linkage between them (Tschan et al., 2004). For example, a study conducted by Hall (2018)showed that large amounts of time that individuals spend together after their first meeting affect their relationship. He indicated that when participants doubled the time spent with their casual friends, they became friends, and when they doubled the time spent with friends, they became best friends. In fact, the results of Hall (2018) study confirmed the previous results of Leary and Kelly (2009), which demonstrated that time invested to spend with a colleague resulted in the expansion of long-term relationships. Other studies by Saramaki et al (2014) and Hall et al (2011)concluded that close pairs at work spend much of their communication time with each other, compared to casual ones. Hence, the duration of individuals' interaction at work can be considered as a predictor of tie strength (Marsden and Campbell, 1984), such that the long duration of interaction denotes strong ties, and the short duration of interaction denotes weak ties (Dissing et al, 2018). Therefore, we posit that the duration of contact has an impact on social capital. Based on that, we come to the second hypothesis:

H2: Duration of contact has a significant impact on social capital.

Physical Proximity

Physical proximity denotes the distance between two individuals; i.e., how far or close individuals are to each other. It is defined as the "spatial distance between actors, both in an absolute and relative meaning" (Boschma, 2005, p. 63). The structural characteristics of close jobs facilitate face-to-face communication and increase the likelihood of frequent conversations among employees (Kabo, 2017). Hence, the design of the workspace that facilitates employees meetings, co-presence, and co-awareness has become of vital importance in enabling the development of social interactions among employees (Wineman et al, 2009). Indeed, the workplace layout is considered a facilitating and generative mechanism of both formal and informal communication (Peponis et al, 2007). Consequently, it contributes to the density of relationship ties (Ganesan et al, 2005). A study conducted by Allen (1977) explored the effect of physical distance between employees working in a research and development department who share the same office. The study confirmed that when employees are physically distanced, their communication significantly declines. Another study conducted by Chin et al (2012) found that the communication generated by physical proximity results in the increased inclination of an individual to accept another individual as a friend. Thus, the spatial architecture of a workplace can effectively promote or impede social relations among employees sharing a work location (Allen, 2000). Based on that concept, the following hypothesis is proposed:

H3: Physical proximity of job has a significant impact on social capital.

Methodology

This is an exploratory study conducted to identify the impact of relational job design components on the development of social capital in an organization. This study was designed to investigate the causal relationship between the independent variables—frequency of contact, duration of contact, and physical proximity—and the dependent variable, social capital. This study used a self-structured

questionnaire to collect data from the study sample. All of the measurement items in the questionnaire were developed based on the relevant literature. Items relating to social capital were developed based on the work of Felicio et al (2014) and Leana and Van Buren (1999). Items relating to frequency of contact were developed based on the views of Joshi et al (2007) and Becerra and Gupta (2003). Items relating to duration of contact were developed based on the definitions of Smith (2006) and Lee et al (2011). Items relating to physical proximity were developed based on the views of Foster et al (2019) and Marrewijk and Ende, (2018). All items were measured using a five-point Likert-type scale, with 1 representing strongly disagree and 5 representing strongly agree.

After the items were developed, they were given to academics who specialized in the same field of research to check for face validity. Based on their results, some items were rewritten and others deleted because of similar inferences with other items. Factor analysis with promax rotation was conducted to test the validity of the measures. The results of the factor analysis indicated that one item from frequency of contact and one item from physical proximity loaded low; therefore, they were deleted. All other items loaded well in their intended factors. Four items measured social capital, with loading ranging from 0.72 to 0.81. Frequency of contact was measured by four items, with loading ranging from 0.73 to 0.88. Five items measured duration of contact, with loading ranging from 0.86 to 0.90. Four items measured physical proximity, with loading ranging from 0.81 to 0.91. The results of the factor analysis indicated that all items were valid to measure the relationship between job design and social capital. The reliability coefficient assessments of the study factors ranged from 0.81 to 0.95, indicating that the measurement instrument was reliable. Hence, the results of the validity and reliability test (Table 1) indicated that the data collection instrument was stable to conduct the data collection.

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Table 1 Reliability and Validity Measures

Factors	Items	Factor Loading	Cronbach Alfa values
Frequency Contact			.918
	FC1	.741	
	FC2	.808	
	FC3	.736	
	FC4	.813	
Duration of Contact			.957
	DC1	.861	
	DC2	.892	
	DC3	.877	
	DC4	.908	
	DC5	.904	
Physical Proximity			.948
	PP1	.810	
	PP2	.890	
	PP3	.886	
	PP4	.904	
Social Capital			.891
	SC1	.778	
	SC2	.808	
	SC3	.816	
-	SC4	.728	

The survey was administered in four organizations operating in the bottled water industry in Saudi Arabia. The selection of participants in the study was based on random sampling; hence, the data were randomly collected from individuals working in these organizations. A total of 300 questionnaires were sent to participants in these organizations, with 209 questionnaires returned, yielding a 70 per cent response rate. Out of 209 returned questionnaires, 6 of which with incomplete data were not included in the analysis. Hence, 203 questionnaires were used in the data analysis, where 54% (n = 110) of the respondents were male and 46% (n = 93) of the respondents were female. The data obtained from the participants in this study were used to investigate the impact of the relational dimensions of job design on social capital. Thus, we conducted multiple linear regression analysis to test the research hypotheses.

Findings and Discussion

The aim of the current study was to explore the impact of the relational structure of job design on social capital. We investigated the impact of frequency of contact, duration of contact, and physical proximity on the development of social capital. The results of multiple linear regression analysis (Table2) indicated that the dimensions of the relational structure of job design have a significant impact on the development of social capital, F(3, 101) = 65.822, p < .001. Moreover, the results show that 66.2% of the variance in the development of social capital can be accounted for by the dimensions of job design. Additionally, the coefficients were further evaluated to identify the influence of each dimension of job design on social capital. The first hypothesis evaluated whether frequency of contact has a significant impact on social capital. The result showed that frequency of contact has a significant impact on social capital (b = 0.697, p< .001).Based on this result, the first hypothesis is supported. The second hypothesis evaluated the impact of duration of contact on social capital. The result indicated that duration of contact has a significant impact on social capital (b = 0.292, p = .016); hence, the second hypothesis is accepted. The third hypothesis evaluated the impact of physical proximity on social capital. The result indicated that physical proximity has an

insignificant impact on social capital (b = -0.153, p = .281), as the p-value exceeds the conventional threshold of .05. Hence, the third hypothesis is rejected. In conclusion, the findings indicated that, of the hypotheses proposed in this study, two of them were supported and the third was rejected.

Table 2	Resul	lts of 1	Regression	Analysis

Variable	Standard error	В	t	P-value
(Constant)	.549			
Frequency of contact	.128	.697	5.463	.000
Physical proximity	.141	153	-1.084	.281
Duration of contact	.119	.292	2.461	.016
\mathbb{R}^2	.662			

In this study, we viewed social capital as relational in nature, where individuals' relationships in the organization are embedded in their contacts with each other. Thus, we considered that job contact encourages prosocial behavior in the workplace. The results show that two of the job design components have a positive impact on social capital. These findings are in accordance with the findings reported in existing research. Frequency of contact was found to have a positive impact on the development of social capital, which indicates that an increase in the frequency of contact is associated with the promotion of social capital in the organization. This result is in congruence with other research Joshi et al (2007), Park and Lee (2014) and Pi and Cai (2017) findings, which demonstrated that an increase in communications between individuals at work is conducive to strengthening the relationship between them. Gittell (2011) attributed that finding to the role that frequency of contact plays in making communicating individuals more familiar with each other. The premise behind this concept is that frequency of contact enhances understanding, interpersonal trust, reliability, and accountability among peers at work.

Duration of contact, in contrast, was found to have a positive impact on social capital. This result indicates that the length of the social interaction among individuals at a workplace is an important factor in strengthening the social ties between them. Hence, if the time that individuals spend on interactions with each other increases, the strength of

their social ties will increase. This result is in line with the findings of with Hall et al (2011), Saramaki et al (2014) and Dissing et al (2018), who held that duration of contact is an important factor in promoting social ties in the workplace. In fact, this view is empirically supported by Hall (2018), who demonstrated that an increase in the amount of interacting time between individuals leads to a state of harmony, which in turn stimulates the development of interpersonal relationships. Thus, it can be said that duration of contact increases individuals' familiarity with each other and trust in each other, which in turn enhances the development of social relations among them.

Contrary to what was expected, physical proximity was found to have no effect on social capital; communication between individuals at work is not affected by their location, regardless of whether they are near or far from each other. This result is inconsistent with empirical studies conducted by Chin et al (2012) and Kabo (2017), who proved that physical proximity is an enabler of individuals' communication at work and leads to the development of social relations. In fact, it can be inferred that the result is an effect of the new organizational structure implemented during the recent COVID-19 pandemic. Physical distancing was one of the measures that organizations implemented to prevent the spread of the coronavirus, as it was assumed that individuals within the workplace needed to maintain distance from each other (Hamouche, 2021). As

the result of that preventive measure and to avoid crowding individuals in the workplace, most traditional (face-to-face) meetings have been converted into virtual meetings. Although the implemented measures have been effective in preventing exposure to the coronavirus, they may lead to a change in work habits. For example, individuals may become more inclined to contact each other via phone calls, emails, and video- and audio-conferencing. Under these circumstances, physical proximity will be ineffective in communication between individuals at work; consequently, it will not lead to the development of social capital in the organization.

Based on the results above, the current study attempts to contribute to the current literature exploring the causal relationship between job design and social capital. This study provides empirical examination of the relationship between the contact characteristics of job design and social capital. First, this research highlights the significance of the contact characteristics of job design, where previous studies of human resources practices measured job design as a whole variable. This study demonstrates the role of the social characteristics of a job in promoting social relations at work. Second, this study offers an explanation of the mechanism through which job design affects the development of social capital. The results in this research show the impact of the contact characteristics of job design (frequency of contact, duration of contact, and physical proximity of a job) on social capital. Third, most of the previous empirical studies explored the role of social capital as an independent or mediator variable; however, little is known about how social capital is formed and sustained in organizations. This study unveils the factors that have a significant impact on the development of social capital. Fourth, although studies by Grant (2007; 2008a) claimed that physical proximity promoted social ties between employees sharing the same work location, the findings of this study indicate that co-location is not effective in promoting social ties. These findings thus advance the empirical evidence about the insignificance of the location characteristics of job design in fostering employees' relationships.

We identified several limitations in this study. The first limitation was related to the context of the study. This research was conducted in Saudi Arabia, where the nature of its culture is collectivist. This culture emphasizes the harmony and interdependence between individuals. In fact, people in Saudi Arabia value social relations and consider it one of the important aspects of their life, whether at work or outside it. Therefore, it is necessary to explore the impact of the contact characteristics of job design on social capital in contexts that are culturally different from the Saudi Arabian culture (i.e., individualist culture). The second limitation was that this study was conducted in manufacturing organizations, where the nature of the work involved different work schedules and required employees to work separately from each other in different locations. Hence, future research should be conducted in organizations that follow the same work schedule and employees work in the same location.

Conclusion

Social relations at work cannot be forced or mandated. Organizations willing to develop social capital have to create a work structure that facilitates interaction among individuals at work. This study provided empirical evidence on the impact of the relational characteristics of job design on the development of social capital. The findings of this study will contribute to the development of a richer understanding of the effectiveness of the contact aspects of job design in creating organizational social capital. By considering that, organizations will be able to direct the pool of social resources they havetowards the attainment of their goals. Moreover, this study considers that the ability of employees to accomplish their tasks is bondedto the social relations that may enable or constrain their performance. Although the contact characteristics of job design are effective in promoting social ties among employees, their effectiveness could be diminished by the implementation of work-related measures that limit communication between employees.

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