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Unorthodox forms of capital in organizations: positive psychological capital, intellectual capital and social capital

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Abstract

The physical or financial values were regarded as capital value in the past, but nowadays alternative assets are also taken into consideration as capital. In this respect, intellectual assets are accepted as the primary source of competitive advantage (Boulton et al., 2000; Lev, 2001; Low, 2000). This study aims to investigate the effect of positive psychological capital on intellectual and social capital and the interrelationship among these three concepts. Beside this, the effect of social capital on intellectual capital is also investigated. In this context, the research was applied to managers and employees who work in various sectors and datas are gathered by a questionnaire form and the structural equation model was used to analyze them. At the end of study the interrelationships among these concepts and their effects to each are expected to provide a useful contribution to academicians, professionals and business life.

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1. Introduction

In today's competitive business environment financial capital is not a sufficient instrument by itself for company's sustainable competitive advantage. In response to this requirement, positive psychological capital, social

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capital and intellectual capital emerged as complimentary capital forms of financial capital. Positive psychological capital covers positive outcomes at the individual and organizational level (Luthans et al., 2010). This form of capital is defined by four dimensions being self-efficacy, optimism, hope and resilience. Social capital reflects resources of social relationships (e.g., Burt, 1992; Loury, 1977) and the norms and values guiding them (e.g., Coleman, 1990; Portes & Sensenbrenner, 1993; Putnam, 1995). Intellectual capital is composed of employees' experiences and skills, customer relationships, technological competency, knowledge and organizational culture that support company's success in the competitive business environment. (Edvinsson, 1997).

This study aimed to investigate the interrelationships among capital forms mentioned above by the support of the related literature. According to Badrinarayanan, et al (2011) the intellectual capital and social capital have an influence on the self-efficacy dimension of positive psychological capital. In the study of Jiambin, Yanli and Kaibo (2014), authors presented the positive effect of intellectual capital on social capital. Reiche, Harzing and Kraimer (2009) proposed that social capital is a supportive instrument for creating intellectual capital. Bourdieu (1993) submits that systematic analysis of the volume and structure of social capital enables examination of the relationships between social and other forms of capital. Nahapiet and Ghoshal (1998), made a similar argument identifying that an interrelationship exists between social and intellectual capital.

1.1. Positive psychological capital

Positive psychological capital is based on positive psychology (Luthans, Avolio, Walumbwa & Li, 2005) and aims to develop positive approaches in managing human resources (Luthans, Avolio, Avey & Norman, 2007). Positive psychological capital is concerned with two main questions: "Who you are?" and "What you want to become in terms of positive development?" (Luthans, Norman, Avolio, & Avey, 2008, Liu, 2013) and goes beyond human capital "what you know?" and social capital "who you know?" (Luthans, Avolio, Walumbwa & Li, 2005).

Depending on the definition of Luthans, Avolio and Youssef (2007), positive psychological capital is "an individual's positive psychological state of development that is characterized by a) having confidence-self efficacy-to take on and put in the necessary effort to succeed at challenging tasks; b) making a positive attribution-optimism-about succeeding no matter in the future; c) persevering toward goal and, when necessary, redirecting paths to goals-hope- in order to succeed; and d) when beset by problems and adversity, sustaining and bouncing back and even beyond-resilience-to attain success" (p.3).

Self-efficacy's roots are based on Bandura's social cognitive theory (Avey, Patera & West, 2006) and defined as an individual's confidence about his or her abilities to success a task within a given context (Stajkovic & Luthans, 1998). In other words, self-efficacy is an individual's perception and interpretation about events and their control (Hayek, 2012; Avey, Luthans & Jensen, 2009). Self-efficacious people have some specific characteristics such as determining high level goals, selecting difficult tasks, displaying high performance to succeed their goals, being patient against obstacles. Depending on these characteristics high-efficacy individuals can easily work independently and accomplish goal even though they take a little support from others (Luthans, Youssef & Avey, 2007). According to Seligman (1998), optimism is an attributional style that explains positive events through personal, pervasive causes and negative events through external, temporary and situation- specific ones (Hayek, 2012; Luthans & Youssef, 2007). Caver and Scheier (2002) defines optimistic people as the ones who expect good things to happen them, pessimists as the people who expect bad things to happen them and the difference between these two is their approaches against events (Luthans, Avey, Avolio & Peterson, 2010). Optimists are less likely to believe the failure or bad events will be occurred again and therefore don't lose their motivation and persistence when they combine their high motivation and persistence with their high performance. Resilience is related with the individuals' responses in stress full environments (Avey, Luthans & Jensen, 2009). It's an ability to make a successful comeback after being assailed by problems or unexpected barriers to success (Luthans et al., 2007b quoted from Avey, Nimnicht & Pigeon, 2009, p.388). According to Strümpfer & Kellerman (2005), resiliency can be defined by some adaptive responses such as an ability to deal or act positively despite undesirable situations; self-repairing after bad events even disasters and readiness to cope with the challenges (Cascio & Luthans, 2013). According to Snyder et al. (1991) hope is positive and motivational sense that is built on achieving goals and finding sufficient ways to meet these goals (Luthans, Luthans & Luthans, 2004). Hope embodies a will power which drives people to reach their goals (Clapp-Smith, Vogelgesang & Avey, 2009; Avey, Luthans & Jensen, 2009). There's a connection between

locus of internal control and hope (Hayek, 2012). Locus of internal control describes the level of people's belief that their own capabilities, experiences or actions can be sufficient to control and manage the situations around themselves and to reach more positive results than negative ones (Wang, Tomlinson & Noe, 2010; Roy & Gupta, 2012). High intrinsic motivation, psychological well being and life satisfaction are common characteristics of these two concepts (Campbell, 2000).

1.2. Social capital

Capital is any asset that is valuable for the production of other assets. Physical capital for instance includes products and resources. Social capital is less tangible than physical capital but facilitates a productive activity. We see that social support comes along with social networks to some extent. The fewer and more limited relations one possesses, the more limited his or her social capital is and therefore the lower the chances that he will have to overcome a problem successfully (Engincan, 2012). Adler and Kwon (2002) identify the major difference of social capital from other forms of capital as it is found in the relations between individuals not in the individuals themselves. So underlining the fact that social capital differs, it can be accepted as a fourth type of capital together with financial, human and physical capital (Lyons, 2002).

Pierre Bourdieu(1986) is regarded as the first scientist who used the term social capital. He defines social capital as "the aggregate of the actual and potential resources which are linked to possession of a durable network of institutionalized relationships of mutual acquaintance and recognition". The second basic definition of social capital belongs to James Coleman (1988) who examines the role of social capital in the production of human capital and defines the concept as 'shared representations, interpretations and systems of meaning among parties'. Coleman and Bourdieu both accepted social capital as a result of interactions among individuals. Putnam(1993) on the other hand, defined social capital as "features of social organization such as trust, norms and networks that can improve the efficiency of society by facilitating coordinated 'action'".

Social capital can be analyzed under three dimensions (Nahapiet and Ghoshal, 1998). The structural dimension represents network of relations as a whole and describes the totality of the impersonal configurations of linkages between actors (Nahapiet and Ghoshal 1998; Wasserman and Faust 1994; Scott 2000). The most important facets of this dimension are the presence or absence of network ties between actors (Scott, 1991; Wasserman & Faust, 1994) and network configuration (Krackhardt, 1989) describing the pattern of linkages in terms of density, connectivity, and hierarchy. (Nahapiet and Ghoshal 1998). Structural capital is dependent on intensity (i.e., the extent to which actors use their ties to interact) and decentralization (i.e., the distributed pattern of interactions) (Rulke and Galaskiewicz 2000).

The cognitive dimension refers to those resources providing shared representations, interpretations, and systems of meaning among parties (Cicourel, 1973 Shared values, interpretations and systems of meaning facilitate learning and knowledge transfer allowing individuals to share each other's thinking processes. These common understandings help individuals make sense of and interpret the world around them (Nonaka, 1994).

The last dimension is the relational dimension which refers to the nature and quality of interrelationships among actors that have been developed through a history of interactions (Granovetter, 1992). The relational dimension focuses on the type of connections that are established within the individuals and the level of trust that is created. Relational dimension focuses on the particular relations people have, such as respect and friendship, that influence their behavior. It is through these ongoing personal relationships that people fulfill such social motives as sociability, approval, and prestige. Trust appears as the key attribute of the relational dimension (Nahapiet&Ghoshal) acting as a social mechanism allowing parties to take actions with confidence that future obligations will be fulfilled and vulnerabilities will not be exploited (Ouchi, 1980; Uzzi, 1999).

Researchers have found social capital to encourage cooperative behavior, thereby facilitating the development of new forms of association and innovative organization (Fukuyama, 1995; Jacobs, 1965; Putnam, 1993). The concept, therefore, is central to the understanding of institutional dynamics, innovation, and value creation.

1.3. Intellectual capital

Companies should consider and manage their tangible and intangible assets effectively to strengthen their place in rival business arena (Cheng, Lin, Hsiao, Lin, 2010). Tangible assets are examined on the balance sheet of a company such as financial capital, land, machines, building, etc. (Bontis, 1999). Intangible assets such as employees' capabilities, knowledge, client loyalty, reputation of company, goodwill are difficult to measure in monetary terms and to observe directly (Derun, 2013; Tan, Plowman, 2008).

Intellectual Capital (IC) includes all intangible resources which provide competitive advantage to companies and improve their market value and financial performance (Su, 2014). In literature most definitions about IC consist of three components which are human capital, structural capital and customer or relational capital (Shaban and Kabida, 2013, Ruta, 2009; Walsh et al., 2008; Yang, Lin, 2009).

Human Capital can be defined as the sum of the key elements such as combined knowledge, skills, experiences, attitudes, competencies of all employees (Hendriks, Sousa, 2012). These elements should also be rare, valuable and cannot easily imitated and replaced (Arafat, Shahimi, 2013). Stewart (1997) used these explanations for human capital "money talks, but it does not think; machines perform, often better than any human being can, but do not invent. The primary purpose of human capital is innovation whether of new products and services, or of improving in business processes" (p.86).

Structural Capital includes all physical and non-physical framework factors in organization such as organizational structures, organizational culture, operational systems, rules, procedures, knowledge management system, databases (Zeglat, Zigan, 2014).

Customer or relational capital is based on the relationship network of companies both with internal (employees) and external actors (customers, suppliers, stakeholders, government, partners, competitors) (Longo, Muro, 2011). It also involves all the knowledge gained in these relationships (Arafat, Shahimi, 2013). Through these relations customer capital also improves the economic wealth of the company by creating customer loyalty, commitment and reducing transaction costs (Kohtamäki, Partanen, Möller, 2013).

2. Research methodology

The target population of this study includes the managers and employees in the companies which operate in different sectors in Istanbul. Convenience sampling model was used to reach a sample. Totally 350 questionnaires were distributed and 292 valid questionnaires were returned with a response rate of 83%. In order to gather the data, a questionnaire was used and distributed to all participants.

In this questionnaire, Positive Psychological Capital was measured by the scale of Çetin and Basım (2012) based on the original scale developed by Luthans et al. (2007a). The scale of Çetin and Basım was composed of 23 items (e.g. "In uncertain times, I usually expect the best", "I'm always optimistic about my future"). The Cronbach's-alpha reliability coefficient for the dimensions of positive psychological capital were 0,88 for hope, 0,89 for resilience, 0,89 for self-efficacy and 0,89 for optimism.

Social Capital was measured by the scale of Karabey (2009) based on the original scale developed by Liao and Walsh (2005) and Tsai and Ghoshal (1998). Karabey measured social capital by 8 items (e.g. "I have a broad social environment", "My social network helps to establish new connections"). The Cronbach's-alpha reliability coefficient for the dimensions of social capital were 0,83 for structural social capital, 0,93 for relational social capital.

Intellectual capital was measured by the scale of Yıldız (2011) based on the original scale developed by Bontis (1998). The scale of Bontis was composed by 38 items (e.g. "We always develop ourselves to create customer loyalty", "The reputation of our company is continuously increasing"). The Cronbach's-alpha reliability coefficient for the dimensions of intellectual capital were 0,88 for human capital, 0,87 for structural capital and 0,82 for customer capital.

The survey questionnaire form included two parts. All items were measured on a 6-point Likert type scale ranging from 1=strongly disagree to 6=strongly agree. The first part consisted of 72 items measuring psychological capital, social capital and intellectual capital. The second part of the survey questionnaire form asked participants to complete demographic questions related to gender, age, marital status, etc.

2.1. Data analysis

Statistical Package for the Social Science (SPSS 21.0), a statistical program and Analysis of Moment Structure (AMOS 21.0) and structural equation modeling (SEM) program were used for the analysis. SPSS was used to conduct descriptive statistics while AMOS was used to perform confirmatory factor analysis (CFA) to verify the appropriate structural model and to prove the conceptual framework of research.

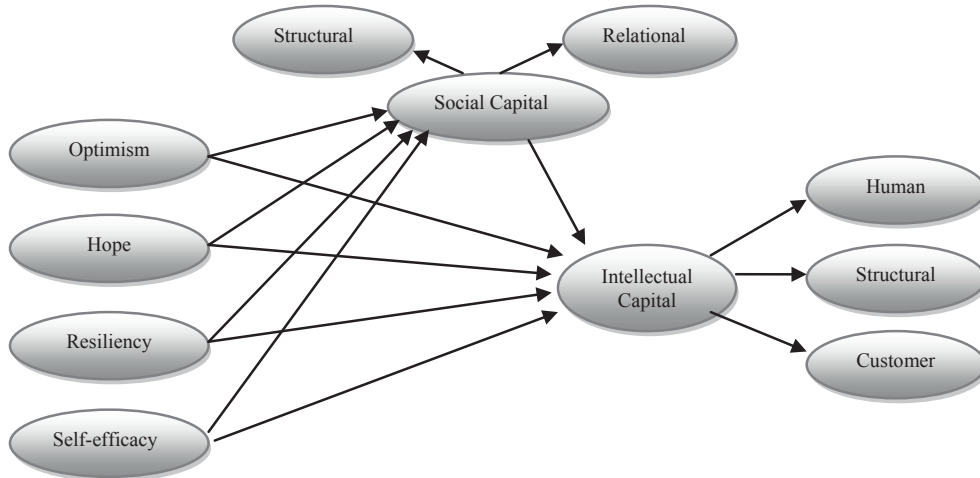


Fig 1. Conceptual Framework of Study

According to conceptual framework of research and what is mentioned in literature review the hypotheses were proposed as follows;

- H₁: Social capital has a positive influence on Intellectual capital
- H₂: Optimism has a positive influence on Social capital
- H₃: Hope has a positive influence on Social capital
- H₄: Resiliency has a positive influence on Social capital
- H₅: Self-efficacy has a positive influence on Social capital
- H₆: Optimism has a positive influence on Intellectual capital
- H₇: Hope has a positive influence on Intellectual capital
- H₈: Resiliency has a positive influence on Intellectual capital
- H₉: Self-efficacy has a positive influence on Intellectual capital

2.2. Description of the sample

Of the 292 respondents, 50% were male while 50% were female and gender were equally represented. The great majority of participants were ages 25-30 (43,1%) while ages 31-39 (33,5%) and 18-24 (14,2%). Of the sample 51,2% possessed a higher education while 35,3% possessed university degree and 55,8% were single, %67,1 were employees while 32,9% were managers.

2.3. Validity measures

First, Cronbach’s Alpha coefficients were calculated to examine the reliability and internal consistency of all constructs under investigation. The Cronbach’s Alpha coefficients should be greater than 0,70. One of item

optimism, hope and resilience constructs were deleted due to its cronbach's alpha values if item deleted being higher than previous value. Table 1 gives the number of items representing each constructs and the Cronbach Alpha values.

Table 1. Cronbach's Alpha of Construct

Constructs	Number Of Items	Cronbach's Alpha
Psychological Capital	21	0,886
Optimism	5	0,702
Hope	5	0,792
Resilience	5	0,771
Self-efficacy	6	0,878
<i>Social Capital</i>	9	0,819
Structural	6	0,749
Relational	3	0,782
<i>Intellectual Capital</i>	39	0,936
Human	12	0,869
Structural	12	0,873
Customer	15	0,839

In this study confirmatory factor analysis (CFA) and structural equation modeling (SEM) analysis were used to check construct validity and to determine the relationships among social capital, intellectual capital and psychological capital dimensions.

In line with the two step approach proposed by Anderson and Gerbing (1988), the analysis took place in two stages. In the first stage, the measurement model was analyzed to check the reliability and validity of the constructs by confirmatory factor analysis. In the second stage, the structural model was prepared to test hypotheses of constructs. Hu and Bentler (1999) suggested the model fit criteria for both measurement and structural model. Accepted model should have $X^2/df \leq 3$ Goodness of Fit (GFI) $\geq 0,90$, Adjusted Goodness of Fit (AGFI) $\geq 0,80$, Comparative Fit Index (CFI) $\geq 0,90$, Root Mean Square Residual (RMR) $\leq 0,10$ and Root Mean Square Error of Approximation (RMSEA) $\leq 0,10$.

2.4. Measurement model

The goodness of fit indices of the measurement model was calculated by confirmatory factor analysis. The baseline CFA model produced an inadmissible solution as an appropriate fit could not be achieved where $X^2/df \leq 3,26$; $p < 0,001$, GFI=0,77; AGFI=0,69; CFI=0,87; RMR=0,069; RMSEA=0,085. One item of resilience and hope constructs, two items of optimism and structural social capital constructs, four items of structural intellectual capital and human capital constructs, six items of customer capital was deleted due to its standardized factor loading being less than 0,50. Also 4 variables were removed as they were found violate standard residual covariances having displayed unusually large values. The final CFA model is comprised of 51 observed variables. Final CFA model fit indicates and all the fit measures for final CFA model was moderately acceptable. Fit statistics are $X^2/df \leq 2,74$; $p < 0,001$, GFI=0,91; AGFI=0,84; CFI=0,93; RMR=0,051; RMSEA=0,067.

The internal validity and consistency of the measurement model is examined by construct reliability and average variance extracted (AVE). Table 2 indicates reliability and AVE values. Fornell and Larcker (1981) suggest that AVE values should at least be 0,50 while Fornell and Bookstein (1982) and Hait et al. (2010) state that construct reliability values of at least 0,60 are suitable. Construct reliability measures for each construct varied from 0,771 to 0,928 while the AVE scores were ranged from 0,513 to 0,707. Therefore these measures were acceptable.

Table 2. Validity of constructs

Constructs	Construct Reliability	AVE
Optimism	0,771	0,543
Hope	0,842	0,521
Resilience	0,855	0,557
Self-efficacy	0,907	0,620
Structural	0,878	0,707
Relational	0,872	0,695
Human	0,924	0,577
Structural	0,928	0,563
Customer	0,913	0,513

2.5. Structural model

In the second part of the analysis the structural model was developed to examine the hypotheses. The structural model was indicated on Figure 2. For structural model all the fit measures indicated that the structural model was moderately acceptable. ($\chi^2/df=2,34$, $p<0,001$, $GFI=0,92$, $AGFI=0,86$; $CFI=0,93$; RMR ; 0,062 and $RMSEA=0,071$).

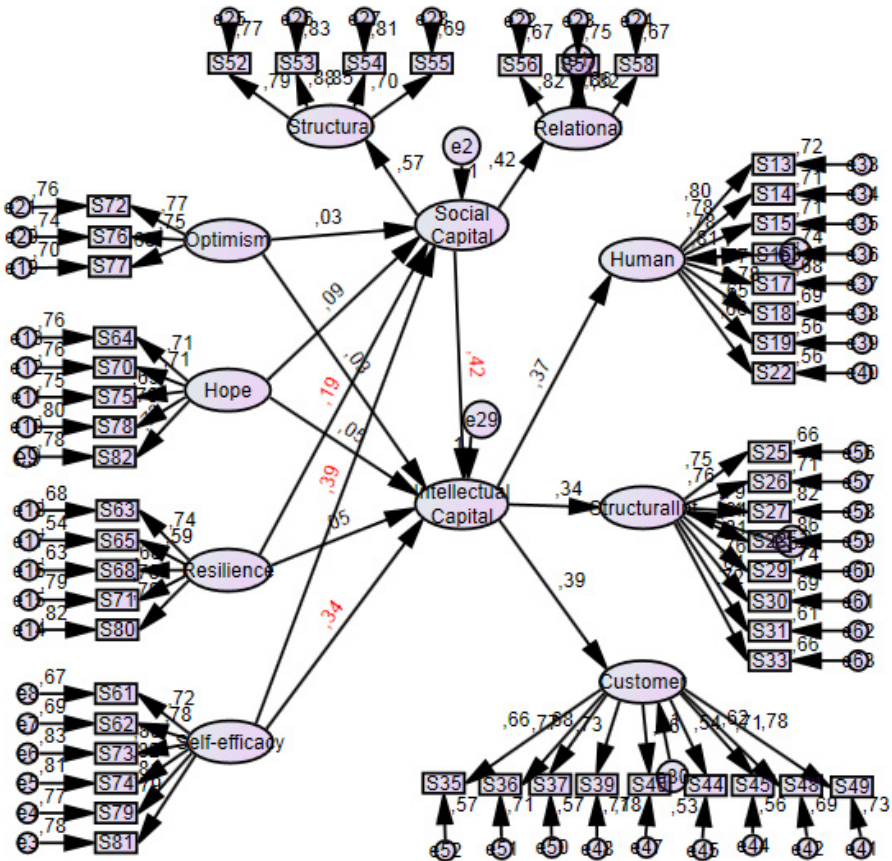


Fig 2. Structural equation model of constructs under the conceptual research

3. Results

Table 3 presents hypothesis test results regarding relationships between psychological capital dimensions and social capital. It also indicates hypothesis test result regarding relationship between social capital and intellectual capital. As indicated in Table 3 three out of five hypothesized relationships are supported at $p=0,001$. Given the results of this finding, social capital has positively influenced intellectual capital and also resilience and self-efficacy had a positive influence on social capital. (H1: $\gamma_1=0.421$, $\text{sig}<0,001$, H4: $\gamma_4=0.194$, $\text{sig}<0,001$, H5: $\gamma_5=0.388$, $\text{sig}<0,001$)

Table 3. Results of hypothesis tests regarding relationship between psychological capital dimensions with social capital and intellectual capital

Hypotheses	Relationships	Standardized Coefficient	Standard of Error	t value	Sig Test	Hypothesis
H ₁	Social Capital Intellectual Capital	0,421	0,049	8,079	***	Supported
H ₂	Optimism Social Capital	0,031	0,053	0,536	0,632	Rejected
H ₃	Hope Social Capital	0,089	0,114	0,782	0,673	Rejected
H ₄	Resilience Social Capital	0,194	0,090	2,53	***	Supported
H ₅	Self-efficacy Social Capital	0,388	0,102	4,243	***	Supported

*** Sig<0,001

On the other hand, Table 4 indicates hypotheses results regarding relationships between psychological capital dimensions and intellectual capital. As shown in Table 5 one out of four hypothesized relationships are supported. The results provided that only self-efficacy has an influence on intellectual capital at a 0,001 level. (H9: $\gamma_9=0.336$, $\text{sig}<0,001$)

Table 4. Hypothesis tests results regarding relationship between psychological capital dimensions and intellectual capital

Hypotheses	Relationships	Standardized Coefficient	Standard of Error	t value	Sig Test	Hypothesis
H ₆	Optimism Intellectual Capital	0,032	0,057	0,479	0,632	Rejected
H ₇	Hope Intellectual Capital	0,047	0,122	0,423	0,673	Rejected
H ₈	Resiliency Intellectual Capital	0,053	0,096	0,594	0,553	Rejected
H ₉	Self-efficacy Intellectual Capital	0,336	0,109	3,157	***	Supported

*** Sig<0,001

4. Conclusion

This paper has presented general knowledge about positive psychological capital, social capital and intellectual capital and discussed their interrelationships and effects to each other. Consistent with the results of related literature, a positive relationship between social capital and intellectual capital was found.

As for the relationship of psychological capital and social capital, only dimensions of resilience and self-efficacy were found to have an effect on social capital, whereas hope and optimism were found to be unrelated. As we expected, people’s confidence about their own abilities, that is the trust in one’s self, may create a base for mutual trust producing relational social capital. On the other hand, ability to cope with challenges may create intensity on interactions, creating structural social capital.

Another results of this study reveal that there was no relationship between optimism, hope and resiliency with intellectual capital. Self- efficacy was the only dimension found to have a relationship with intellectual capital. This dimension of psychological capital can be defined as the power of the individuals’ confidence with their abilities, skills and knowledge. This confidence can be seen as an important material to create an innovation spirit which is

placed under the human dimension of intellectual capital. This point of view, can explain the positive relationship between the self-efficacy and intellectual capital.

This study investigated the relationships under the dimensions of positive psychological capital with social and intellectual capital. The main limitation of the research is the lack of direct effect of positive psychological's dimensions on the dimensions of social and intellectual capital. For this reason, further studies structured on this relationship will make valuable contribution to related literature.

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