

## **Organizational Motivation Mediating the Innovation Capability: Intellectual Capital of the Textile & Apparel Industry in Sri Lanka**

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### ***Abstract***

*The main purpose of this study is to evince the mediation influence of organizational motivation between intellectual capital and innovation capability by constructing the relationship based on the three components of Intellectual capital namely human, organizational and social capital of the Apparel industry in Sri Lanka. The shift of the traditional tangible assets towards intangible assets of intellectual capital which creates a crucial factor for the achievement of the innovation capability. This study has been explored: First previous works have almost exclusively focused on the co-alignment between intellectual capital and innovation capability. Second, while the relationship between intellectual capital and organizational motivation been theoretically inspected, the relationship has been analyzed empirically. Third, the paper investigates the multidimensional and contingent gradual effect of intellectual capital on innovation capability through the mediating role of organizational motivation. The study was conducted in Sri Lanka. Random sampling technique and structured questionnaires were used for data collection. These results demonstrated that the component of intellectual capital has significant positive relationship and mediated by organizational motivation on innovation capability. The findings of this research will be useful for Apparel Industry to understand and apply intellectual capital to create innovation in their organizations.*

**Key words:** Intellectual capital, Innovation capability and Organizational motivation

### **1. INTRODUCTION**

The emergence of the knowledge economy, intense global competition and considerable technological advance has seen innovation become increasingly central to competitiveness. Innovation is diverse and pervasive. It is applicable to every facet of business activity of each enterprise. The importance of innovation to both individual organizations and the economic development of society have been highlighted in the literature as far back as Schumpeter (1942). Huber (1984) postulated that innovation, and institutionalized experimentation, will take on an added importance in post-industrial organizations, whose environments will be characterized by increasing knowledge, complexity and turbulence. More recent research has established a positive link between innovation and business performance (Covin & Slevin, 1989; Dess, Lumpkin & Covin, 1997; Morris & Sexton, 1996; Zahra & Covin, 1995). The ability to innovate on a sustained basis, an innovation capability, is important as research has shown that organizations possessing

innovation capabilities have a sustained competitive advantage, Alvarez & Barney,(2000) and use it to achieve higher levels of performance. Hurley & Hult, (1998).

Today, the intellectual capital is recognized as the most important and vital ingredient for the success of organizations in a competitive environment. Present economy is a knowledge-based economy. The main ingredients of the production-based economy were land, labor, capital and physical assets. However, in a knowledge-based economy intellectual capital (IC) has become more important to add values when it is compared to physical assets (Bontis, 2001; Yalama, 2007; Khalique, et.al, 2011). In the same way that intellectual capital has been recognized as the most important source of competitive advantage of various organizations which lead to increase the organizational performance and a country's economic growth. Cohen & Kaimenakis, (2007); and Chong & Lin, (2008) also pointed out that intellectual capital is the most powerful source to influence positively on the performance of organizations. Shih, Chang & Lin (2010) argued that there are little studies that focused on the relationship of intellectual capital with the organizational performance.

The apparel industry is very important for the development of economy in Sri Lanka. The role of Apparel industry in economy is highly acknowledged. The apparel sector around the world has grown as a knowledge concentrated sector in dynamic and competitive environment. Moreover, the Apparel sector is a good sector for research on intellectual capital issue because this sector is knowledge intensive and its entire staff are moreover are identical intellectually. From the last decade, the Apparel sector has been undergoing dramatic change in both organizational and technological advancement pushing top management to reformulate their business strategies Cabrita & Bontis, (2008). In addition, Bhartesh & Bandyopadhyay (2005) pointed out that it is very important for organizations to understand their intellectual capital assets and should need to be properly managed if the organizations want to compete successfully in competitive environment. Therefore, it is indispensable that the executives of the apparel industry learn to employ the intellectual capital to improve their organizational performance in a knowledge-based economy.

The apparel industry is one of the most lucrative foreign exchange earnings for the Asian region. The Sri Lanka is a developing country and a small tropical island off the southern tip of India which is situated in South Asia. Today apparel industry has become one of the largest incomes generating avenue in Sri Lanka. It has contributed to the 52% of the country's export earnings in 2012. In addition to that the industry directly employs nearly 300,000 people as workforce all over the country. There are 891 garment factories of which 177 are small, 468 – medium, and 266 – large scale factories and also the industry produces around 500 mn. pcs. per annum of which woven accounts for 55% and knitted 45% Saheed, (2005).The industry spreads the huge area of the

country and can be seen number of factories are operating in every district in the country. The significant character of this industry is 85% young women employees are been employed as workforce. Talking about apparel industry, industry use low technology & it can be introduced as labour intensive industry. Perera, et al (2008); Sivalogathan, V., (2010). The apparel industry is labour intensive industry, so individual behavior & attitudes of these industry workers are very important to identify.

Therefore, the overarching research question of this paper is, "What are the factors and intellectual capital practices that facilitate the development of innovation capability of the Apparel Industry of Sri Lanka?" in answering this question. We draw on the theoretical approaches of the resource based theory of the firm, Penrose. (1959); Barney, (1991) and the innovation literature that focuses on the organization level of analysis, Lawrence & Lorsch, (1967); Nohria & Ghoshal, (1997).

## **2. LITERATURE REVIEW**

### **2.1 Intellectual Capital**

The intellectual capital as a form of knowledge, intellect, and brainpower activity, which used knowledge to create value. The importance of intellectual capital in a knowledge-based economy is widely accepted and Stewart (1997) pointed out that intellectual capital is referred as to the accumulation of all knowledge, skills and expertise of employees that can lead to take competitive advantages. In the same way Edvinsson and Sullivan (1996) argues that intellectual capital is essentially defined as the knowledge assets that can be converted into value. In addition, Bontis (1998) illustrated that intellectual capital comprises three components: human capital, customer capital and structural capital. Moreover, researchers argued that intellectual capital is mainly based on intangible assets for example knowledge, skills of employees, customer satisfaction, loyalty, policies, procedures, social value, intellectual property, industrial property, faith, ethics etc., (Edvinsson & Malone 1997; Sveiby 1997; Bontis, 1998; Ismail, 2005; Bueno et al., 2004; Khalique et al., 2011). They argued that intellectual capital is mainly based on human capital, customer capital, structural capital, social capital, technological capital and spiritual capital. In this study, only three components of intellectual capital namely human capital, organizational capital and social capital were tested empirically.

Human capital is mainly based on the individual abilities, knowledge, know-how, talent, education, skills and experiences of employees in organizations. Human capital is the most important component of intellectual capital, and it is critical for creativity and innovation, ( Bontis 1998; Edvinsson & Malone 1999; Stewart 1997, Khalique, Shaari, Isa & Ageel, 2011). Snell & Dean (1992) pointed out that human capital is creative, bright and skilled employees with expertise in their function. Human capitals refer to processes that relate to training, education and other professional initiatives in order to increase the levels of knowledge, skills, abilities, values, and

social assets of an employee which will lead to the employee's satisfaction and performance, and eventually on a firm performance. Human capital is an important input for organizations especially for employees' continuous improvement mainly on knowledge, skills, and abilities. Thus, the definition of human capital is referred to as the knowledge, skills, competencies, and attributes embodied in individuals that facilitate the creation of personal, social and economic well-being (OECD, 2000). The human capital focuses two main components which is individuals and organizations. This concept have further been described by Garavan et al., (2001) that human capitals have four key attributes as follows: (1) flexibility and adaptability (2) enhancement of individual competencies (3) the development of organizational competencies and (4) individual employability. It shows that these attributes in turn generate add values to individual and organizational outcomes.

Social capital is recognized as one of the most important components of intellectual capital (Khalique et al., 2011). Social capital is a sum of resources accumulated in the organization by a stable network of intra organizational relationships. Naphat & Goshal, (1998) argued that organizations having high social capital can take more competitive advantage and they pointed out that it mainly based on three dimensions which is widely accepted such as structural, cognitive and relational. These dimensions of social capital create the value of the intellectual capital of an organization. Cohen & Prusak (2001) stipulated that social capital represents the value of human connections based on confidence and on personal networks. It includes the set of relationship with the remaining social agents which is playing highly significant role in the development of intellectual capital in an organization, Cohen & Prusak, (2001); Bueno et al. (2004). There is no doubt that social capital can be regarded as a conceptual innovation in contemporary management and other social science disciplines. Social capital has facilitated a series of very important empirical investigations and theoretical debates which have stimulated reconsideration of significance of human relations, of networks, of organizational forms, of trust for quality of life and of developmental of performance of an organization.

Organizational capital is also one of the most important components of intellectual capital. Organizational capital is a glue of organization. It based on the internal structure of the organization, to the processes and procedures, guidelines, rules and etc. It encompasses of all non-human storehouse of knowledge in organizations including organizational competitive intelligence, routine, formula, policies, procedures and databases, Cabrita, (2009); Khalique, et.al, (2011). While human and social capital constitutes a significant portion of a firm's intellectual capital, they are an incomplete account of intellectual capital without organizational capital. This is because human and relationship-based repertoires of organizational knowledge are not perfectly reliable due to the limited and error-prone information-processing capabilities of individuals and collectives. As such, a great deal of organizational information needs to be recorded and stored in

standard operating procedures, databases, patents, structures, and systems (Huber, 1991; Subramaniam & Youndt, 2005).

## 2.2 Innovation Capability

The Innovation capability as higher-order integration capabilities and propose a mixed model comprising vision and strategy, harnessing the competence base, organizational intelligence, creative and idea management, organizational structures and systems, culture and climate, and management of technology. Teece & Pisano (1994) further developed the area proposing dynamic capabilities theory as the subset of the competences/capabilities which allow the firm to create new products and processes and respond to changing market circumstances. As Lawson & Samson (2001) note, there is no one generic formula of innovation capacity. Innovation capacity can be proposed as an ability to manage multiple capabilities. An innovation capability can be defined as the ability to continuously transform knowledge and ideas into new products, processes and systems for the benefit of the firm and its stakeholders. Innovation capability is as the ability to create new and useful knowledge based on previous knowledge Kim (1997). It is the comprehensive set of characteristics of an organization that facilitate and support innovation strategies. The innovation capability is critical for competitive advantage; however, this capability has been discussed as *dynamic capability* (Teece, Pisano, & Shuen, 1997), *core capability* (Leonard-Barton, 1995), *combinative capability* (Kogut & Zander, 1992), *core competence* (Prahalad & Hamel, 1990), and *integrative capability* (Lawrence & Lorsch, 1967), and these authors consider it as key for competition. However, despite the extensive debate about its importance, there is still limited understanding of how organizations develop it. As Foss, Knudsen, & Montgomery (1995) indicate that the question of intentionality becomes particularly salient when considering how a firm sets out to build a given set of capabilities.

Knowledge creation in this study denotes an intellectual capital to apply knowledge that has been acquired and learned, to commercial ends. It refers to the capability to exploit acquired knowledge through finding out new, improved, and refined ways of doing things that create organizational value or increase operational efficiency (Zahra & George, 2002). Incremental innovations refine and reinforce exiting products, services, and processes typically by exploiting the existing knowledge base of a firm (Subramaniam & Youndt, 2005). Such innovations should be more prevalent compared to radical innovations which major transformations of exiting products, services, processes. Innovation also is defined as the capability to develop new products that satisfy market needs; applying appropriate process technologies to produce these new products; developing and adopting new products and processing technologies to satisfy future needs; and responding to accidental technology activities and unexpected opportunities created by competitors (Adler & Shenbar, 1990).

The potential impact of a firm's innovation capability on its competitive advantage has been widely recognized and documented in the innovation management and strategy literatures. An important source of competitive advantage for firms is to utilize organizational resources that are rare, valuable, inimitable, and non-substitutable (Barney, 1991). Therefore, an importance of innovation management literature indicated that innovation capability has also come to be an important part of the competitive power of the firms. Innovation capability refers to the firm's ability to transform and knowledge and ideas into new products, processes systems for the benefit of the firms (Lawson & Samson, 2001). Concisely, innovation also needs the transformation and exploitation of existing knowledge. Nonaka (1994) suggested, main importance of innovation occurs in organization when employees share their knowledge.

### **2.3 Organizational Motivation**

The effects of Intellectual capital on Innovation capability and firm competitive advantage should be mediated by organizational motivation of internal and external factors. This argument is consistent with the work of Zahra & George (2002) who claim that firms that focus extensively on learning from and exploring the environment can constantly renew their knowledge stock but cannot benefit from it unless they can exploit what they have learned from their environment. Similarly, in organizational motivation, March (1991) notes that Adaptive systems that engage in exploration to the exclusion of exploitation are likely to find that they suffer the costs of experimentation without gaining many of its benefits. They exhibit too many underdeveloped new ideas and too little distinctive competence. Therefore, the absorptive capacity theorists suggest organizational motivation should play a mediating role in the Intellectual capital and Innovation capability lead to firm competitive advantage and performance relationship. In this study Cost – efficiency, Reputation status, Market share, and Government support are considering as mediating variable of organizational motivation.

*Cost efficiency:* Innovation capability is often regarded to be a key factor in realizing firm innovations. Innovation is market-driven. Firms innovate in order to gain an advantage over competitors, perhaps by becoming more cost-efficient, by tailoring products to meet unique customer requirements, or by improving access to service in new markets. The success of an innovation depends fundamentally on its commercial value which is the ultimate final goal for firms to innovate.

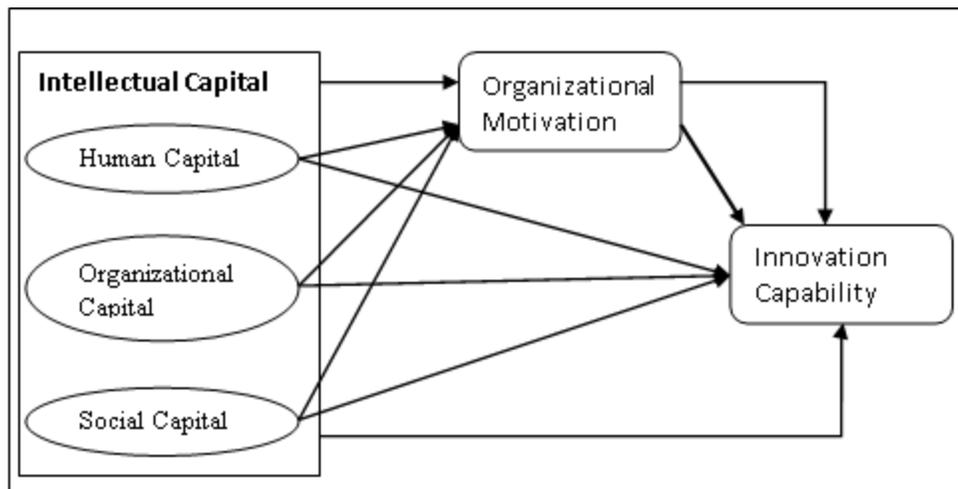
*Reputation status:* Reputation and Demanding customers/users are the key driving forces for firm to innovate. Also the customer requirement provides the important and direct input for firms. A deep understanding of the consumer is seen as a driver of innovation. The lead, world class customers provide the clear directions for firms. Advanced suppliers are enablers of the innovation and also provide the innovation knowledge source. So sophisticated domestic customers, advanced

suppliers have extremely positively impact on firm's innovation. A combination of consumer knowledge with technical knowledge results in innovations with a greater chance of success.

*Market share:* Build a market share and opportunity identification are the start of any innovation. The right opportunity identification is the key to the firm innovation results. It can be the new market or new application industry, customer requirement change, new technology change, new business models and alliance opportunity. How to perceive and capture the innovation opportunity is first step of successful innovation. The attractive market opportunity drives the firms to enter into market, innovate and grow. But the opportunity must be thoroughly substantiated to identify market potential where the firm can make profit and grow.

*Government supports:* Government policy and support plays an important role for country innovation system. With unique challenges and barriers of innovation faced by firms, government need to build up conducive environment for firm innovation, like facilitate the entry of small new players, provide necessary incentives, lower the entry and exit barriers, helping with network buildup, market intelligence etc. With limited resources and capabilities firms have difficulty to build-up necessary research and development capability. External inputs are a very important source of innovations for firms. Networks and collaboration are important means of accessing innovation opportunity and source.

**Figure 1:** Conceptual model of this study



Source: Author developed

In order to identify the relationship of intellectual capital with the Innovation capability of apparel industry in Sri Lanka, three components of intellectual capital, namely human capital, organizational capital and social capital were employed as independent variables, and innovation capability was a dependent variable, and mediating variable was organizational motivation. Previous studies revealed that intellectual capital is positively associated with the organizational performance of organizations (Bontis, et al., 2000; Huang & Wu, 2010, Sivalogathan & Wu, 2013). The research model hypothesized that there is a direct and positive association between intellectual capital and innovation capability. The flow of relationship between the variables is depicted in Figure 1. Based on the conceptual model, the following three research hypotheses were constructed.

*H<sub>1</sub>: Intellectual capital has a significant, positive effect on Innovation capability of the Apparel Industry in Sri Lanka.*

*H<sub>1a</sub>: Human capital has positive association with Innovation capability of the Apparel Industry in Sri Lanka.*

*H<sub>1b</sub>: Organizational capital has positive association with Innovation capability of the Apparel Industry in Sri Lanka.*

*H<sub>1c</sub>: Social capital has positive association with Innovation capability of the Apparel Industry in Sri Lanka.*

*H<sub>2</sub>: Organizational motivation has positive association with innovation capability of the Apparel Industry in Sri Lanka.*

*H<sub>3</sub>: Organizational motivation will mediate the relationship between Intellectual capital and innovation capability of the Apparel Industry in Sri Lanka.*

### **3. RESEARCH METHODOLOGY**

The qualitative and quantitative methods were used as research methodology in this study. Prior to the main study, a pilot study was undertaken that helped refine data collection plans with respect to both the contents of the data and procedure to be followed. A structured questionnaire based survey having 42 items was used to collect the data from Apparel Industry in Sri Lanka. The amended version of Bontis, (1998), Ismail (2005), Bueno et al., (2004), Young, et al., (2007), Choudhury (2010), Mei-Chun Chen(2001), Shu-Hsiao Tsen et.al (2010), Minbaeva, et.al (2003) Omar,et.al (2011), Yitmen (2011), Smith et al. (2005), Galunic et al (2004), Landry et al. (2002), Lubatkin et al. (2006), questionnaires items were used for this study. The amendments were made to ensure that the constructs is relevant to this research in Sri Lankan context. A total of 150 set of questionnaires were distributed in Sri Lanka. A total of 70 set of complete questionnaires were returned. The response rate was 47% which was considered as a good. The collected data by means of questionnaires from the apparel manufacturing firm of Sri Lanka, which have experiences of manufacturing and international business. The employees who fill in the questionnaires are firm's

high, middle and executive level manager, whom have enough knowledge and experience to fill in the questionnaires.

The questionnaire design of the research follow each observable dimension and the itemized measurement method was adopted for implementation. The measurement of questionnaire adopted five-point Likert scale, a score of 1 to 5 was given according to the extent of agreement and disagreement, a 5-point represents an strong agreement, a 1-point represents an strong disagreement, the higher the extent of agreement, the higher the score; conversely, lower scores. Then, to eliminate the linear overlap between the independent variables and the mediating variable, to test the interaction between the independent variables and the mediating variable, the Baron and Kenny methods was used. With regard to the questionnaire design of intellectual capital the about three dimensional scales of human capital, organizational capital and social capital were used to design 15 questions. With regard to the questionnaire design of organizational motivation, the scales of 4 questions were designed. As to the measuring indicator of Innovation capability a total of 6 questions were used.

The research divided the questionnaire into three concept variables of intellectual capital, organization motivation, and innovation capability. And each concept variable can be divided into the following observable variables, and each observable variable has several questions in the survey. The data obtained from the survey was then processed, and the original questionnaire data file was established; as to the construction of the measurement system of the research model. The data were screened and cleaned, to ensure the reliability of the instrument, Cronbach Alpha was used. Cronbach Alpha value is widely used to check the reliability of the construct. The results showed that human capital had a coefficient of 0.848, organizational capital of 0.911, social capital of 0.881, innovation capability of 0.857 and organizational motivation of 0.618. All constructs had showed above the suggested value 0.5 (Nunnally and Bernstein, 1994). Therefore, on the basis of reliability test it was assumed that the scales used in this research is reliable to capture the constructs. Reliability of the constructs is shown in Table 1.

The simple mediation model, which is the focus of this article, is diagramed in Figure 1. If it is assumed that organizational motivation (OM) and Innovation capability (InC) are treated as continuous, Intellectual capital (IC) is either dichotomous or treated as continuous, and all effects are modeled as linear, then the various effects in this model ( $c$ ,  $c'$ ,  $a$ , and  $b$ ) can be estimated with using a structural equation modeling (SEM) program. In the regression context, two linear models are required to estimate OM and InC, as such: (1) and (2). There are two effects of IC that are of primary interest in mediation analysis. Most central is the indirect effect of IC, quantified as the product of coefficients  $a$  and  $b$ , which  $ab$ , is interpreted by two cases. The direct effect ( $c'$ ) quantifies how much two cases differ by one unit on IC.

$$OM = i_1 + aIC + eOM \quad (1)$$

$$InC = i_2 + c'IC + bOM + eInC \quad (2)$$

$$InC = i_3 + cIC + eInC \quad (3)$$

Though not a focus in modern approaches to mediation analysis, the total effect of IC on InC, represented as coefficient  $c$ , is the sum of IC's direct effect on InC and its indirect effect on InC through OM, i.e.,  $c = c' + ab$ . Thus, the total effect can be estimated by combining estimates derived from Equations (1) and (2). However,  $c$  can be equivalently estimated from (3). The simple mediation model is parameterized with two linear models, one for  $OM$  and one for  $InC$ , using the  $HC_1$ ,  $OC_2$ ,  $SC_3$  variables to represent intellectual capital group membership. The linear models are (4), (5) and (6).

$$OM = i_1 + a_1HC_1 + a_2OC_2 + a_3SC_3 + eOM \quad (4)$$

$$InC = i_2 + c'_1HC_1 + c'_2OC_2 + c'_3SC_3 + bOM + eInC \quad (5)$$

$$InC = i_3 + c_1HC_1 + c_2OC_2 + c_3SC_3 + eInC \quad (6)$$

Although formal estimation of the relative total effects is straightforward, it is not actually necessary, for regardless of the system used for coding groups, the relative total effects are equal to the sum of the corresponding relative direct and indirect effects.

#### 4. RESULTS AND DISCUSSIONS

In this research study attempted to explore the relationship between the components of intellectual capital, Organizational motivation and Innovation capability of apparel industry in Sri Lanka. Mainly three research hypotheses were constructed. The Pearson correlation was used to test research hypotheses. The results of the study indicate that the components of intellectual capital are positively related to the Innovation capability of apparel industry in Sri Lanka. The result also shows that organizational capital has more positive relationship with Innovation capability as compared to other variables. Moreover, judging from the findings of the Pearson correlation human capital is the second variable and social capital is the third variable that shows positive significant relationship with innovation capability. Therefore, the findings supported the research hypotheses  $H_1$  of the study. The results of Pearson correlation are depicted in Table 1 and Figure 2.

**Table 1:** Descriptive statistics and Pearson Correlation

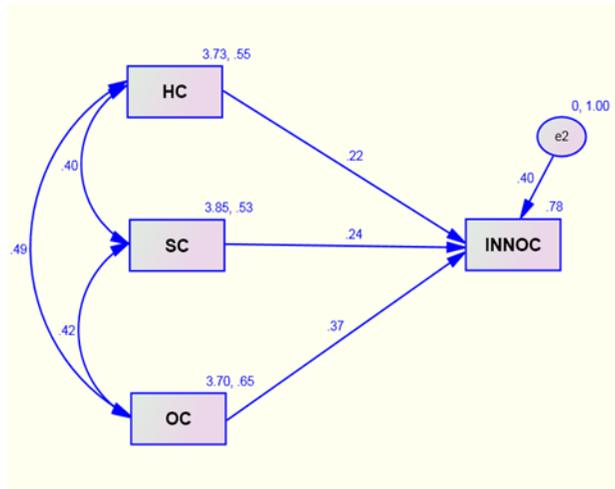
Variables	Mean	SD	Cronbach Alpha	HC	OC	SC	InC
Human Capital (HC)	3.73	0.745	0.848	1			
Organizational Capital (OC)	3.70	0.813	0.911	0.826**	1		
Social Capital (SC)	3.85	0.734	0.881	0.743**	0.712**	1	
Innovation Capability (InC)	3.88	0.713	0.857	0.758**	0.785**	0.714**	1
Organizational Motivation (OM)	3.69	0.862	0.618	0.825**	0.724**	0.695**	0.738**
HC (after mediation)				0.000	0.587**	0.417**	0.392**
OC (after mediation)					0.000	0.421**	0.414**
SC (after mediation)						0.000	0.539**
							0.000

\*\*Correlation is significant at the 0.01 level (2-tailed)

Source: Survey data

Partial correlation between human capital and innovation capability is 0.392 which is less than the correlation when organizational motivation is not mediated (0.758), value of  $R^2$  for the partial correlation is 0.15 which means that the human capital can now account for only 15% of the variance in innovation capability. When the effect of the organizational motivation was not mediated, the human capital shared 57% of the variation in innovation capability and so the inclusion of organizational motivation has diminished the amount of variation in innovation capability which means that the organizational motivation has mediation effect on the relationship between the human capital and innovation capability.

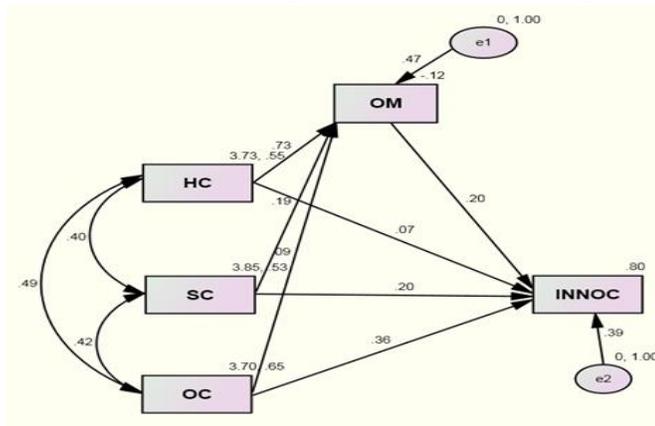
**Figure 2:** Regression and covariance model of Intellectual capital and Innovation capability



Source: Survey data

The partial correlation values between the other two independent variables; social capital and organizational capital, and dependent variable innovation capability are 0.414 and 0.539 respectively. These values are lower than the correlation between social capital and innovation capability (0.714), and between organizational capitals to innovation capability (0.785) without the mediating effect of organizational motivation. These finding clearly indicate that there is a mediation effect of the organization motivation between social capital and innovation capability and also between organizational capital and innovation capability. Therefore, the findings supported the research hypotheses  $H_2$  and  $H_3$  of the study. However, the partial correlation reported between independent, dependent variables and mediation variable which are more interested in practical utility of the firm than interpersonal issues in surrounding the innovation capability.

**Figure 3:** Regression and covariance with mediation effects of Organizational motivation between Intellectual capital and Innovation capability



Source: Survey data

**Table 2:** Regression and model summary

Variables	M1	M2	M3	M4	M5	M6
HC	0.226 (0.098)		0.632 (0.000)			0.071 (0.646)
SC	0.243 (0.027)		0.166 (0.118)			0.203 (0.064)
OC	0.426 (0.001)		0.084 (0.500)			0.405 (0.002)
IC		0.822 (0.000)		0.815 (0.000)		
OM			a	a	0.738 (0.000)	0.246 (0.052)
InC	a	a			a	a
$\beta$	0.779	0.731	-0.120	-0.084	1.626	0.803
$R^2$	0.679	0.671	0.697	0.665	0.545	0.698
$F$	46.598	141.605	50.685	134.769	81.326	37.477
Sig	0.000**	0.000**	0.000**	0.000**	0.000**	0.000**

a - dependent variable,

\*\*Correlation is significant at the 0.01 level (2-tailed)

Source: Survey data

A single-factor analysis of variance on the innovation measure reveals the expected effect of Intellectual capital on Innovation capability,  $F(3, 66) = 46.598, p < .000$ . All possible pairwise comparisons between group means using a pooled error term reveals that those assigned to the highly had a significantly more positive on innovation capability. There is also evidence from a single-factor ANOVA that IC affects OM influenced perceptions of interactivity,  $F(3, 66) = 50.685, p < .000$ . All possible pairwise comparisons between group means reveals that the Intellectual capital on Innovation capability as significantly more interactive by mediating variable organizational motivation. There is a relationship between Intellectual capital and Innovation capability after mediating, such that the organizational motivation had a significantly more positive on innovation capability about the value,  $b = 0.738, p < 0.000$ . This establishes that OM is related to InC, holding IC constant. See table 2.

The direct effects of IC on InC through OM are constructed by AMOS standardized parameter estimates for the effect of intellectual capital on organizational motivation and the effect of organizational motivation on innovation capability independent of intellectual capital. Thus, the

organizational capital was perceived as 0.405 values more interactive than was the social capital as 0.203, the human capital was perceived as 0.071 values and the organizational motivation was perceived as 0.246 ( Table 3). The indirect effects are estimated as products of coefficients and are interpreted similarly to the direct effects, the human capital results (0.155) in a more favorable innovation capability as a result of greater perceptions of interactivity in the intellectual capital, which in turn leads to a more favorable innovation capability. The indirect effect of social capital and organizational capital are 0.041 and 0.021 respectively. These indirect effect are statistically different from zero, indicating that these intellectual capitals indirectly influence innovation capability through organizational motivation. Thus, total effect of the intellectual capital and organizational motivation on innovation capability, the organizational capital yields (0.426) on innovation capability is more favorable toward the organizational motivation on average relative to intellectual capital. Furthermore, social capital yields (0.237) attitudes that is more favorable on average than human capital yields (0.226), and total effect of organizational motivation on innovation capability is 0.246.

**Table 3:** Estimate standardized indirect, direct and total effect of mediation and Sobel Test

Variables	Indirect effect		Direct effect		Total effect		Sobel test		
	OM	InC	OM	InC	OM	InC	<i>t-value</i>	<i>S-e</i>	<i>p-value</i>
HC	0.000	0.155	0.632	0.071	0.632	0.226	1.832	0.099	0.0668
SC	0.000	0.041	0.166	0.203	0.166	0.243	1.236	0.036	0.2163
OC	0.000	0.021	0.084	0.405	0.084	0.426	0.641	0.050	0.5212
OM	0.000	0.000	0.000	0.246	0.000	0.246			

\* $p < 0.05$ ,

Source: Survey data

As noted above, approach to mediation analysis infer the existence of indirect and direct effects through a logical argument based on the successful accepting of hypotheses  $H_2$  and  $H_3$  about the effect of intellectual capital on innovation capability by mediating organizational motivation. But, the Sobel test is analytically superior to this approach because it is based on an explicit quantification of the indirect effect, but inappropriately assumes normality of the sampling distribution of the product of coefficients and is not as powerful as competing methods. The methods are available for making inferences about indirect effects in statistical mediation analysis (MacKinnon et al., 2002, 2004). According to Sobel test  $p$  – value of human capital is 0.067, social capital is 0.216 and organizational capital is 0.521, at the  $p < 0.05$  level. The fact that the observed  $p$ -value does not fall below the established alpha level indicate that the association between the intellectual capital and innovation capability not affect significantly which are not significant at

all by the inclusion of the mediation of organizational motivation in the model, in other words there is no evidence of significant mediation.

These results are, in some way, confirmed by other recent empirical studies. Concerning the greater importance intellectual capital compared to that of innovation capability efforts, as our results show, the capability of innovation seems indeed to be more important in this industry. The estimates of the parameters seem to confirm that intellectual capital and innovation capability efforts are enormously important to the Apparel Industry of Sri Lanka. In addition, the indirect effect of intellectual capital, through motivation, emerges here as critical denoting the importance of having a reasonably higher stock of intellectual capital to enable a firm to reap the benefits of its innovation capability efforts. The empirical results of the study showed that the components of intellectual capital have positive significant relationship mediated by the organizational motivation on Innovation capability of Apparel Industry in Sri Lanka. Previous studies also supported the findings of this research study such as Bontis et al., (2000), Cabrita and Vaz (2005), Goh (2005), Shaari et al., (2010) and Khalique et al., (2011). The result shows that the employed components of intellectual capital have vital contribution to achieve the innovation capability.

## **5. CONCLUSION**

The main purpose of study was to find out the impact relationship of intellectual capital with the Innovation capability and this impact result is mediate by organizational motivation of Apparel Industry in Sri Lanka. Generally, the study concludes that intellectual capital is a very important factor for the success of the organizations in a knowledge based economy. The component of intellectual capital, namely human capital, organizational capital, and social capital showed positive relationship with innovation capability. On the basis of findings the study suggests that the components of intellectual capital can play a significant role and organizational motivation is mediating to enhancing the innovation capability of Apparel Industry in Sri Lanka.

The intellectual capital of an organization that consists of its human, social, and organizational capital is likely to mediate the effect of organizational motivation on Innovation capability. Although motivation in itself can lead to greater levels of Innovation capability, its real impact may depend on the extent to which there are individuals who are capable of exploiting the acquired knowledge, organizational norms for sharing and exchanging knowledge within the organization, and systems and structures in place for storing and withdrawing information in the organization. There are several reasons to believe that organizational motivation will be more conducive to innovation capability in organization with higher levels of intellectual capital. Organizational motivation factors such as reputation status, low cost, market share and government support are very important and influence on firm innovation and performance.

The findings of the study will be helpful to practitioners, policy makers and top level managers to understand the concept and role of intellectual capital in depth. This is a preliminary study in apparel industry to analyze the role of intellectual capital in apparel industry in Sri Lanka. Therefore, this study will be a milestone for practitioners to explore their intellectual capital in more appropriate way. The researches would like to suggest future researchers to extend the sample size for more generalized results. Finally, the researchers would also like to recommend the potential contributors to conduct their study which incorporated all the major components of intellectual capital.

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