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EFFECTS OF INTELLECTUAL CAPITAL ON ORGANIZATIONAL PROGRESSION: A STUDY OF FOOD MANUFACTURING AND SERVICE IN DHAKA CITY

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Abstract: The purpose of the study is to find out the relationship between intellectual capital (i.e. human capital, structural capital, and customer capital) and organizational progression in the food manufacturing and service area of Bangladesh. Today's economy is recognized as information based economy wherever, knowledge, and pliable assets have considered as valuable as the physical assets. The research have been conducted a survey of 120 different level managers and workers of the food manufacturing and service sector in Mirpur area. The researches have been following some objectives which include; human capital, Structural capital and customer capital which influence the progression in the organization. Data have been collected using a prepared questionnaire based on five point Likert scale. To test the hypotheses of the study some statistical analyses have been performed. These are- Pearson correlations, reliability test, Cronbach's alpha and Multiple Regression Analysis. The SPSS statistical software 23.0 versions and MS. Excel have been used to perform these statistical analyses. The study of the data finds out that intellectual capital which has a positive influence on the progression of organization. In intellectual capital components, human capital was the most prominent factor with correlation coefficient of 77.4%.

Keywords: Intellectual capital, Customer capital, Structural capital, and organizational progression.

1. Introduction

Today's work gradually transferred from manual work to conceptual work. Now most of the organizations are seeking more innovative work. Organizational performance and higher to that of the competitors, make a good use of their opportunities and benefit from the threats on their way. Intellectual capital management in organizations has become the most important measure of developing a successful business framework. Study on intellectual capital in Bangladeshi environments is still very limited and no study had been undertaken to examine the effects of intellectual capital on organizational progression of Bangladeshi SMEs. Here researchers basically trying to find out whether intellectual capital important for investing or financial capital. Now food industry plays a significant sector in Bangladesh. Most of us now enjoying eat food from different food shop. So the research topic is very exceptional and not much work done on this topic.

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Literature Review

2.1.1 Intellectual capital

Intellectual capital consists of intangible and intellectual properties which create organizational value. John Kenneth Galbraith in 1969 (Feiwal, 1975; Nick, 1998) was the pioneer of Intellectual Capital. Drucker (1999) described it "knowledge workers" (Feiwal, 1975) .Intellectual capital is one type of assets which are not shown in the balance sheet said by Roos and Roos (1997). Steward (1994), Edvinsson and Malone (1997), Johnson (1999), and Smith and Parr (2000), proclaimed that intellectual capital is encompassed of three components: human capital, structural capital (organizational capital) and relational capital (customer capital). (Khalique, Abdul Nassir Shaari, Md. Isa & Ageel, 2011; Amrizah & Rashidah 2013 and Ngah & Ibrahim, 2012) said that intellectual capital is plays an important role in developing countries because it is an important strategic assets.

2.1.2 Human Capital

Bozbura, 2004 said that intellectual capital is the capital which derived from the employees' professional skills, motivating knowledge and taking challenging work. According to Bontis, 2001, human capital is a combination of employee's expertise, knowledge, motivating and controlling or organizing capabilities. Now a day's human resource is considered one of the valuable assets in any organization (Khan, Farooq & Hussain, 2010).

2.1.3 Customer capital

Customer capital is a relation to the present and future customers in the organization. Organization's progression is the directly related to customer capital. Michigan University establishes that, customers' devotion increases the organizations goodwill and reduces the price fluctuate. (Chen et al., 2004). Customer capital is a relationship with customers and suppliers, and other parties. Akpinar and Akdemir (1999), proclaimed that, "organization's relationships or network of associates and their satisfaction with and loyalty to the company".

2.1.4 Structural capital

According to Roos and Roos, 1997, structural capital is what remains in the organization when personnel go home at night. On the opposite, a strong structure helps to reduce total costs and increase profit and productivity (Bontis, 2003). According to Akpinar & Akdemir, 1999, structural capital comprises of different ideas, computers and system, different models and patents. An organization is an intentional structure. It means structural capital is the associate with customer demand which helps to meet organizational strategies. Many researchers found that good and well structured organization will help to organizational progression (Amrizah & Nawal, 2013)

Statement of the Problem

In the light of above justification, the researchers have outlined the research problem as - Effects of Intellectual Capital on Organizational Progression (A research of food manufacturing and service in Dhaka city)

Theoretical framework of the study:

Figure: 3 Theoretical framework of the study

Most of the research on Intellectual capital done by developed countries outside South Asia; Bangladeshi service sector like fast food add greatly to the national GDP. So researchers find out the effects of IC on the progression of organization like food industry in Bangladesh.

2. **Research Objectives** The study is tried to find out the relationship between three elements of intellectual capital such as human capital, structural capital, and customer capital and with organizational progression in Bangladesh.

The following objectives came up to achieve the purpose of the study:

1) To identify the relationship between Human Capital and organizational progression.

2) To examine the relationship between Customer Capital and organizational progression.

3) To find out the relationship between Structural capital and organizational progression.

4.1 Research Hypotheses

Hypotehsis-1: Ho: There is no association between Human Capital (HC) and the organizational progression (OP)

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Hypotehsis-2: Ho: There is no association between Structural Capital (SC) and the organizational progression (OP)

H-2: There is association between Structural Capital (SC) and the organizational progression (OP)

Hypotehsis-3: Ho: There is no association between Customer Capital (CC) and the organizational progression (OP)

H-3: There is association between Customer Capital (CC) and the organizational progression (OP)

Research Methodology:

Nature of Research

This research is a conclusive type. For the function of the research primary data are used. The variables which were selected for the study as follows:

1. Independent variables: Human Capital, Structural Capital, Customer Capital.

2. Dependent variable: Organizational Progression.

Target Population

The population of the study comprised of different level managers and workers who are readily involved in the different fast food manufacture and service of the food manufacturing and service sector in Mirpur area. So the population of the study is limited to selected area. It has very difficult for the researchers to visit each fast food shop situated in Dhaka city, so researcher has been conveniently selected in Mirpur area and included in the sample. Researchers had to visit most of the sample fast food shop again and again. Researcher personally met with them to collect data. However, to collect primary data researchers have been taken data from various fast food shop such as -BFC, CFC, CITY MAHAL, FFC, TFC etc.

Sample Size and Sampling technique

For sample size determination non-probability convenience sampling technique are used. The sample size of the study was confined of above mentioned fast food shop are 120.

Data Collection Instruments

The primary research data are obtained from the various fast food shop situated in Dhaka city at Mirpur area using a questionnaire. To obtain the primary data from the respondents structured questionnaires have been developed. Researcher divided the questionnaire into three parts for collecting relevant information. The first part of the questionnaire has been human capital of the organization. The second part of the questionnaire has been covering the questions regarding structural capital. The third part of the question nairetried to collect data about the customer. capital and by using five point Likert's Scales ranging from strongly agree (5) to strongly disagree (1).

3. Data Analysis

Data analysis tells us which technique researchers have followed. To test the hypotheses of the study some statistical analyses are performed. These are- Pearson correlations, reliability test Cronbach's alpha and Multiple Regression Analysis. The SPSS statistical software 23.0 versions and MS. Excel was used to perform these statistical analyses. Data Analysis, Discussion and Findings

From this table 1 we can see that the cronbach's alpha is .746 which said us internal consistency for our scale from different questions asked about intellectual capital effect on organizational progression.

Table-1 Reliability Statistics

Cronbach's Alpha	N of Items
.746	44

Table-2 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.925[a]	.856	.855	.24923

a. Predictors: (Constant), Human_Capital

The result tells us an R-square of 0.856, which indicates that the model is capable of explaining Percent of the changeability of the human capital in the food shop under study. The adjusted R-square said that 85.5 percent of the difference in the dependent variable in the model used which explained by variations in the independent variables.

Table -3 ANOVA[b]

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	43.736	1	43.736	704.106	.000[a]
Residual	7.330	118	.062		
Total	51.066	119			

a. Predictors: (Constant), Human_Capital

b. Dependent Variable: OP_Human capital

For this table-3, indicates that the regression model assumes that the dependent variable significantly well. This tells us the statistical significance of the regression model that was run. Since, $p < 0.0001$, which is less than 0.01.

Table-4 Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.510	.135		3.785	.000
Human_Capital	.879	.033	.925	26.535	.000

a. Dependent Variable: OP_Humancapital

Hypotheses testing Hypothesis 1

The coefficient for human capital is 0.879 which is statistically significant at the 0.000 level (P < 0.01, two tailed). The result tells us that human capital has positive impact on organizational progression. Thus, null hypothesis is rejected and alternative hypothesis is accepted.

Structural Capital

Table-5 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.902[a]	.813	.811	.22056

a. Predictors: (Constant), Structural_Capital

The result tells us an R-square of 0.813, which indicates that the model is able of amplification percent of the changeability of the structural capital in the food shop under study. The adjusted R-square said that 81.1 percent of the variation in the dependent variable is explained by variations in the independent variables.

Table-6 ANOVA[b]

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	24.963	1	24.963	513.148	.000[a]
Residual	5.740	118	.049		
Total	30.703	119			

a. Predictors: (Constant), Structural_Capital

d. Dependent Variable: OP_Structuralcapital

For this table-6, tells us that the regression model predicts the dependent variable significantly fit. This indicates the statistical significance of the regression model that was run. Since, $p < 0.0001$, which is less than 0.01.

Table-7 Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.649	.159		4.082	.000
Structural_Capital	.913	.040	.902	22.653	.000

a. Dependent Variable: OP_Structuralcapital

Hypothesis 2

The coefficient for structural capital is 0.913 which is statistically significant at the 0.000 level (P < 0.01, two tailed). The result tells us that structural capital has positive impact on organizational progression. Thus, null hypothesis is rejected and alternative hypothesis is accepted.

Customer Capital

Table-8 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.834[a]	.696	.693	.27327

a. Predictors: (Constant), Customer_Capital

The results tell us an R-square of 0.696, which indicates that the model is capable of amplification percent of the changeability of the customer capital in the food shop under study. The adjusted R-square indicates that 69.3 percent of the variation in the dependent variable explained by variations in the independent variables.

Table-9 ANOVA[b]

Model	Sum of Squares	df	Mean	F	Sig.
1 Regression	20.142	1	20.142	269.714	.000[a]
Residual	8.812	118	.075		
Total	28.953	119			

a. Predictors: (Constant), Customer_Capital

b. Dependent Variable: OP_Customercapital

For this table-9, tell us that the regression model predicts the dependent changeable significantly fit. This indicates the statistical significance of the regression model that was run. Since, $p < 0.0001$, which is less than 0.01.

Table-10 Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.222	.175		6.992	.000
Customer_Capita l	.779	.047	.834	16.423	.000

a. Dependent Variable: OP_Customercapital

Hypothesis 3

The coefficient for customer capital is 0.779 which is significant at the 0.000 level (P< 0.01, two tailed). The findings tell us that customer capital has significant positive impact on organizational progression. Thus, null hypothesis is rejected and alternative hypothesis is accepted.

Table-11 Correlations

Variables				
Human Capital	1			
Structural Capital	.490[**]	1		
Customer Capital	.366[**] .	.445[**]	1	
Organizational Progression	.774[**]	.766[**]	.667[**]	1

To test the research hypotheses Pearson correlation and multiple regression was used. The result in Table -11 Shows that, human capital, structural and capital customer capital, has positive relationship with organizational Progression. This study tried to find out relationship between the components of intellectual capital and organizational progression of food sector in Bangladesh. The roles of intellectual capital in food sector, three research hypotheses were constructed. Pearson correlation was used to test the proposed research hypotheses of the study. The result of the study illustrated that each of the components of intellectual capital is positively related to the organizational progression of food sector in Bangladesh. Correlation coefficient (0.774), which showed that human capital, appeared as the most important component of intellectual capital in influencing organizational progression of food sector in Bangladesh. The correlation coefficient of the structural capital and customer capital were 0.667 and 0.445

respectively, and they were significant at 1% level. Thus, this appears to indicate that structural capital and customer capital tend to have lower influence on the progression of food sector in Bangladesh than that of human capital. Overall, the results illustrated that their components of intellectual capital have positive relation with organizational progression. The findings of the study supported the three research hypotheses.

1. Conclusions

From the above analysis it is proved that all types of capitals included in the study are directly related to the progression of an organization. All factors have positive association with progression of an organization. If the performance of the employee improves routinely performance of organization improves. It is proved that human capital is major component for the organizational improvement. Value of p showed significant outcome having smaller then 0.01. On the basis of it first hypothesis that there is positive relation of human capital and progression of an organization proved statistically. So, from study we draw up conclusion that human capital and progression of organization are positively associated.

Second component under study is *structural capital* in which we focus on structure working and research promotion of an organization. On the basis of it study draw conclusion that structural capital shows association with progression. And statistically it is also shown significant performance of an organization which it also the second results by showing p-value less than

0.01. Means if structural capital works well then progression of an organization also show improvement.

Third component is *customer capital* in which majorly focuses on relationship building with customers and suppliers. Statistically it shows significant results by giving again p-value less than 0.01. Also table showed the positive association among customer capital and performance. And if customer is strong then organization must work well. On the basis of it third hypothesis also prove not only with the help of literature but also on the basis of statistical calculations. Value of reliability also shows that results of this study are significant Above are the three results draw from the study and we conclude that all the components have positive association with progression of an organization. Thus, study concludes that improvement in intellectual capital causes improvement in progression of an organization. This study is applied on the food sector of Bangladesh so from study it is concluded that relationship exists between intellectual capital and progression of food sector.

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