

The Impact of Intellectual Capital on Employee Productivity by Considering the Mediating Role of Employees dependence in Bank Melli branches of West Azerbaijan

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Abstract

The main purpose of the present research is to investigate the effect of intellectual capital on employee productivity considering the mediating role of employee's dependence in the branches of Bank Melli of West Azerbaijan. The research method was descriptive-survey. The statistical population of the study was employees of branches of the Bank Melli of West Azerbaijan, whose number is 931 people. The sample size was estimated using Cochran's formula of 272 people and it was selected by stratified random sampling method. The data collection tool was a questionnaire thus in order to calculate intellectual capital, Bontis (1998) questionnaire was used to measure the productivity, the Hersey and Gold Smith's Manpower Productivity Questionnaire (1981) and Schoffell's (2002) questionnaire was used to measure employees' belonging. The questionnaires were analyzed using path analysis using LaserLes software. The results indicate that intellectual capital affects productivity, taking into account the mediating role of employees in the branches of the National Bank of West Azerbaijan.

Keywords: Intellectual Capital, Productivity, Dependence.

Introduction

Today, productivity in organizations is not merely the result of the use of traditional sources of material production, such as material capital and land, but also knowledge and intellectual capital as a source of wealth creation against other tangible and physical assets and in these organizations, the real wealth of organizations, attracting and exploiting the specialty of humanity, the knowledge and skills of these people, the processes of the internal, the culture of the organization, the reputation and reputation for the customers and the stakeholders is the intellectual capital as productivity increases for organizations and employees, if intangible assets are effectively managed. In recent years, the concept of intellectual capital has been widely developed in the scientific and executive circles of the world. There are many definitions of intellectual capital. Ross and his colleagues (1997) argue that capital employees create their thinking through the merits, attitudes, and chords of their minds. Brocking (1996) believes that the intellectual capital of an organization includes skills, expertise, problem-solving ability, and leadership style.

Brooking believes that intellectual capital consists of three types of capital, including: human capital, structural capital, and customer capital. Human capital represents the tacitly established knowledge of employees' minds, and is characterized by a combination of knowledge, skill, talent, competence, thinking and creativity of the employees. Structural capital includes all the inhumane knowledge in the organization and includes databases, organizational charts, executive instructions, and processes. Customer capital is the available knowledge in marketing channels and customer relationships. On the other hand, when there is a sense of belonging and organizational loyalty in the organization, an intimate and familiar environment is created. In such an environment where people are familiar with each other over time and find a sense of belonging and loyalty to life in a group, doing things is much easier and group activities are moving well and fast. In such a situation (Isa Khani and others, 2014), It can be expected that staff productivity and efficiency will also increase. In recent years, due to Western sanctions and other economic problems that the country faces, one of the issues encountered by organizations, and in particular financial institutions and banks, is the lack of productivity or inadequacy of its costs. The branches of the Bank Melli of the West Azerbaijan Province are no exception, and the inefficient productivity of its employees is one of the problems that these banks are struggling with. A lot of research has been done on factors affecting employee productivity. Each of the scholars, according to their expertise and theoretical views, has different reasons for this. From the study of research, it seems that factors such as intellectual capital and employee belonging are also involved or influential in this connection. However, there are differences of opinion between scholars and scholars. Regarding the material that was expressed and the importance of the subject, the main issue of the present research was formed. Therefore, the main objective of this research is to examine the effect of intellectual capital on employee productivity by considering the mediating role of employees in the branches of the National Bank of West Azerbaijan.

Methodology

The method of this research is descriptive-survey. The statistical population of the study was employees of branches of the Bank Melli of West Azerbaijan, whose number is 931 people. The sample size was estimated using Cochran's formula of 272 people and selected by stratified random sampling method. The data collection tool was a questionnaire. In order to measure intellectual capital, Bontis (1998) questionnaire was used to measure the productivity of Herscy and Gold Smith (1981) manpower productivity questionnaires (1981) and Schuferian questionnaire (2002) to measure employees' belonging. The collected questionnaires are analyzed using path analysis using LaserLevel software.

Findings

Descriptive statistics of variables

Descriptive statistics of mean, standard deviation, skewness and dispersion describing each of the research variables (intellectual capital, affiliation, and productivity) are presented in Table 1. As can be seen, the intellectual capital leadership variable has an average of 3.38 and the deviation is 0.393 the mean of belonging criterion, is 3.21 and the standard deviation is 0.337 and the productivity is 3.10 and the standard deviation is 0.227. The skewness and elongation parameters to evaluate the normal distribution of statistical observations show that the skewness of the observed variables for variables is in the interval (-2, 2), that is the variables of the research are normal and have symmetric distribution, and the amount of elongation is also for the research variables in the interval (-2, 2), which indicates that the distribution of the research variables has a normal elongation. Therefore, the indexes of skidding and elongation for research variables indicate that the research variables are skewed and elongated in normal position.

Table (1): Descriptive statistics indexes of research variables

Variable	mean	SD	skewness	elongation
Intellectual Capital	3.38	0.393	-0.662	0.313

Attachment	3.21	0.337	0.556	1.806
Productivity	3.10	0.227	0.116	-1.604

Inferential statistics

Kolmogorov-Smirnov test

The results of the Kolmogorov-Smirnov test in Table (2) showed that for all variables, the significance level of the test was greater than the error level of 0.05 ($\text{sig} > 0.05$), meaning that the statistical distribution of observations in each of the research variables was 95 The percentage is normal and the zero test hypothesis (assuming normal) is confirmed.

Table 2: Results of Kolmogorov-Smirnov test (k-s test)

Variable	Kolmogorov-Smirnov test	Significance
Intellectual Capital	1.389	0.075
Attachment	0.940	0.103
Productivity	0.368	0.200

The fitness of conceptual model of research

The fitted model of research in meaningful test mode and standard estimation in the Laser List software environment are shown in Figures 1 and 2, respectively.

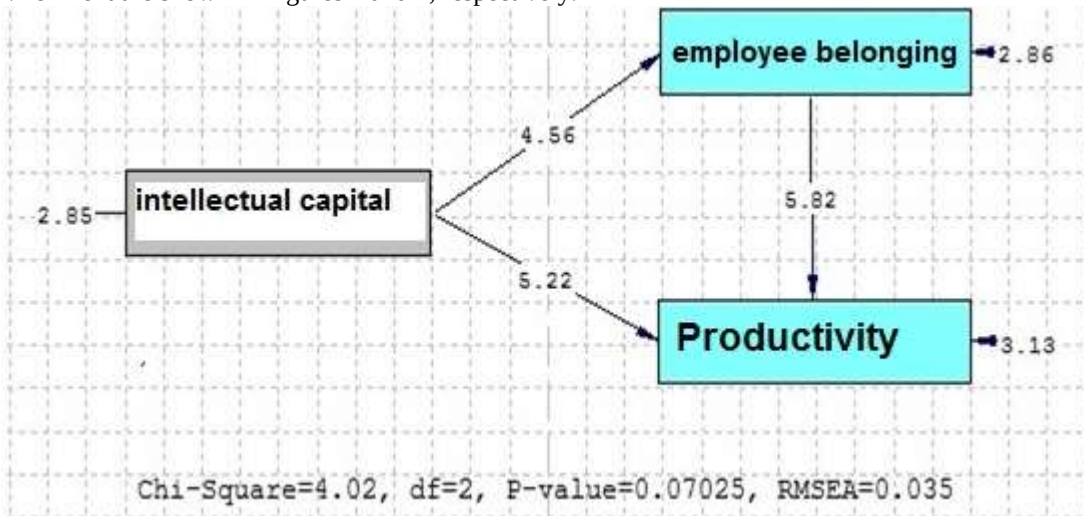


Chart (1): Conceptual model of research in standard estimation mode in Lisrel software

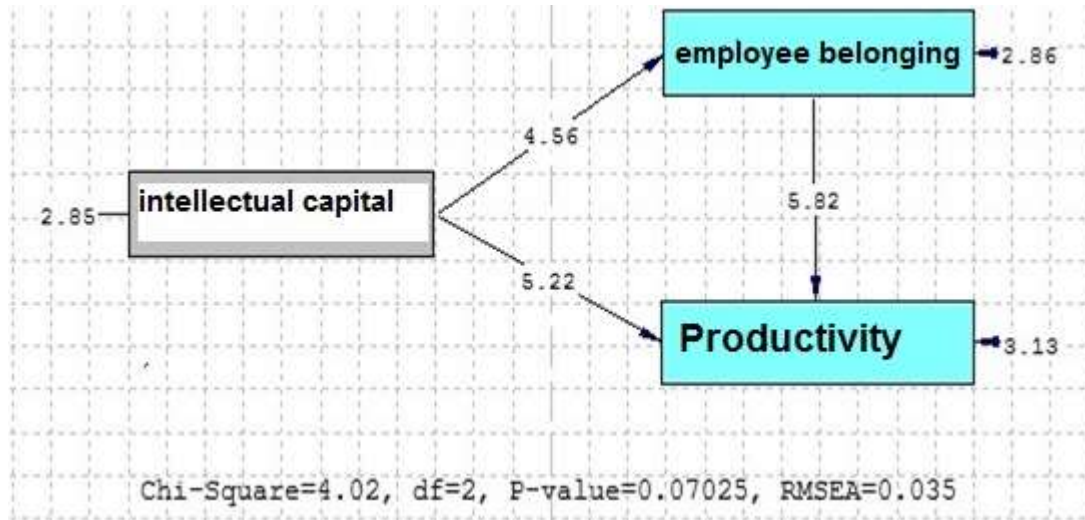


Chart (2): Structural Model of Research in Significant Testing of Directions in Lisrel Software
The fitness indicators for the conceptual model of research using the Lisrel software are presented in Table (3), as we can see that the fitting-goodness indicators presented in the approximate range of acceptance, that is, the observed data largely corresponds to the conceptual model of research and the conceptual model of the research has a suitable fit.

Table 3: Fitness indicators for measuring the conceptual model of research

Fitness Indexes	χ^2	P-value	RMSEA	CFI	GFI	IFI	df	χ^2/df
The estimated value	4.02	0.07025	0.035	0.96	0.93	0.95	2	2.01
Approximate Approach Range	-	Bigger than 0.05	Less than 0.05	0.9to1	0.9to 1	0.9 to 1	-	Less than 3

Test of research hypotheses

Based on the estimated parameters in the conceptual model fitted and using the path analysis method, the hypotheses of the research are tested.

Testing the main hypothesis: The intellectual capital affects employees' productivity by considering the role of employee mediation mediators in the branches of the Bank Melli of West Azerbaijan

The results of path analysis to test the main hypothesis are shown in Figures 1 and 2 in Table 4, as can be seen: The standard coefficient of the path of the influence of intellectual capital on employees' belonging is 0.39, that the value of the obtained t-statistic (4.56) is greater than the critical value of 1.96 (1.96-t value), which means that the effect of intellectual capital on employee membership is positive and significant at the level of 5% error. The standard coefficient of the pathway is the effect of employees' affiliation on productivity of 0.47 which means that the value of t statistic (5.82) is greater than the critical value of 1.96 (t-value> 96), that is, the effect of employees' Productivity is positive and significant at 5% error level. Therefore, considering the meaningfulness of the paths of the effect of intellectual capital on employees' affiliation and the effect of employees' affiliation on productivity, intellectual capital is positively and significantly influenced by employee attachment to productivity. The standard coefficient is the indirect effect of intellectual capital on the productivity of 0.184, that is, by increasing intellectual capital as much as a standard deviation, the productivity through the employee mediation role

increases by as much as 0.184 of standard deviation find out as can be seen, intellectual capital explains 3.4 percent of productivity variance through the mediating role of employees, thus the main hypothesis of the research is confirmed with 95 percent confidence.

Table 4: Results of path analysis to test the main hypothesis

path	Standard coefficient of the path	t	The indirect standard coefficient	The variance explained by productivity through the mediating role of employee belonging
The Influence of Intellectual Capital on Employee Affiliation	0.39	4.56	0.184	0.034
The Effect of Employee Affiliation on Productivity	0.47	5.82		

Testing of subsidiary hypothesis of research

Testing the first subsidiary hypothesis: The intellectual capital affects employees' belonging in the branches of the National Bank of the West Azerbaijan Province.

The results of path analysis for testing the first hypothesis based on Figs. 1 and 2 are given in Table 5. As can be seen, the standard coefficient of the path of the effect of intellectual capital on the employee's membership is 0.39, which results in t statistic (4.66) is greater than the critical value of 1.96 (1.96t-value>), which means that the effect of intellectual capital on employee membership is positive and significant at the level of 5% error and as intellectual capital increases as much as a standard deviation, employee membership increases by as much as 0.39 standard deviations. The value is equal to 0.152, that is, in total 15.2% of the variance of employees' belonging to the intellectual capital is directly derived, so the first hypothesis of the research is confirmed with 95% confidence.

Table 5: Results of path analysis to test the first hypothesis

path	The standard coefficient of the path	t	R^2
The Influence of Intellectual Capital on Employee Affiliation	0.39	4.56	0.152

Testing the second sub-hypothesis: Employee affiliation affects employee productivity in the branches of the National Bank of the West Azerbaijan.

The results of the path analysis of the second hypothesis test are based on Fig. 1 and 2 in Table (6). As can be seen, the standard coefficient of the path of the effect of employees' affiliation on productivity is 0.47. The t statistic (5.82) is greater than the critical value of 1.96 (1.99-t / value), which means that the effect of employees' affiliation on employee productivity is positive and significant at the 5% error rate. As the accruals increase as much as a standard deviation, employee productivity increases by as much as 0.47 standard deviations. R^2 is equal to 0.220 That is, in total, 22% of the variance of employee productivity is directly correlated with employee membership, so the second sub-hypothesis of the research is confirmed with 95% confidence.

Table 6: Results of path analysis to test the second hypothesis

Path	The standard coefficient of the path	t	R^2
The Effect of Employee Affiliation on Productivity	0.47	5.82	0.220

Third sub hypothesis test: The intellectual capital affects the productivity of employees in the branches of the National Bank of the West Azerbaijan Province.

The results of the path analysis of the third hypothesis test are based on Figures (1) and (2) in Table (7). As can be seen, the standard coefficient of the path of the effect of intellectual capital on employee productivity is 0.44, which is a statistic t (5.22) is greater than the critical value of 1.96 ($96 / 1t\text{-value} >$). That is, the effect of intellectual capital on the productivity of employees at the level of 5% error is positive and significant. By increasing intellectual capital as much as a standard deviation, the productivity of employees increases by 0.44 standard deviations.

The value of R is 0.194, that is, in total 19.4% of the variance of employee productivity is directly correlated with intellectual capital, so the third sub-hypothesis of the research is confirmed with 95% confidence.

Table 7: Results of path analysis to test the third hypothesis

Path	The standard coefficient of the path	t	R^2
The Influence of Intellectual Capital on Employee Productivity	0.44	5.22	0.194

Discussion and Conclusion

The main objective of this research was to investigate the effect of intellectual capital on employee productivity considering the mediating role of employees in the branches of the National Bank of West Azerbaijan. The results of data analysis showed that intellectual capital affects employee productivity by taking into account the mediating role of employees in branches of the National Bank of West Azerbaijan. In justifying this finding, it can be said that employees who have a psychological capital such as self-efficacy, hope, optimism and resilience have a high morale and self-esteem and experience higher job satisfaction and motivation, resulting in a degree of belonging the staff increases, and as a result of increasing employee membership, productivity increases. The results of data analysis showed that intellectual capital affects employees' belonging to the branches of the National Bank of West Azerbaijan. This is consistent with Sadeghi's findings and others (1391), Karami (2016), Samani and others (2014), Chan (2009), Ahmad Al-Dojaly (2012) and Fabian (2012). In justifying this finding, it can be said that employees with high intellectual capital have high knowledge and good social relations, so it can be said that employees who have a lot of work to do more work and to achieve the goals of the organization Employee membership increases. The results of data analysis showed that employees' affiliation to employees' productivity was influenced by branches of the National Bank of West Azerbaijan. This is consistent with Sadeghi's findings and others (2012), Karami (2016), Samani and others (1393), Chan (2009), Ahmad Al-Dojaly (2012) and Fabian (2012). In justifying this finding, it can be said that increasing employees' commitment to employees leads to organizational commitment and commitment, thereby improving their productivity and thus increasing the productivity of the organization.

The results of data analysis showed that intellectual capital affects employees' productivity in branches of the National Bank of West Azerbaijan. This is consistent with Sadeghi's findings and others (2012), Karami (2016), Samani and others (2014), Chan (2009), Ahmad Al-Dojaly (2012) and Fabian (2012). In justifying this finding, it can be said that employees with high psychological capital are more resilient and tolerant of organizational hardships and disadvantages, thus increasing their productivity despite all the difficulties or difficulties.

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