



## The Impact of Psychological Capital on the Operational Performance of Firms

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### Abstract

The aim of this study is to examine the impact of psychological capital on the operational performance of firms during 2008 to 2014. So, the components of psychological capital, including self-confidence, hope, optimism and resilience, and their impact on the operational performance of the subsidiary firms of Parsian Bank were studied. The results obtained from regression analysis of the firms' data, at the confidence level of .95 and using the panel model with fixed effects, suggest that the components of psychological capital have a direct influence on the operational performance of the subsidiary firms of Parsian Bank.

**Keywords:** Psychological capital; Operational performance; Self-Confidence; Hope; Optimism and Resilience.

### Introduction

Psychological capital is a positive and developed state of psychology which has the following features: commitment and the required effort to succeed in performing challenging tasks (self-confidence); positive attitude towards present and future successes (optimism); perseverance in achieving a goal, and changing the procedure whenever needed to achieve this goal (resilience); and perseverance in the face of difficulties and problems of achieving success (hope) (Lotanze et al, 2007). Psychological capital is something beyond human and social capital (Lotanze, 2002; Lotanze et al 2004; 2006; 2007). In these studies, it has been proven that compared to the more well-known approaches such as human and social capital, psychological capital provides a more thorough look towards positive job attitudes. Moreover, in comparison to human and social capital, psychological capital is a better estimation of commitment and job satisfaction among the employees (Donalson & Ko, 2010; Karolin, 2007). Although psychological capital is often neglected today, "what I am" is as important as "what I know" and "who I know" (Levine, 2005). Results of the experimental studies prove the existence of a positive relationship between psychological capital and favorable organizational variables. Furthermore, such studies show that by using the intervention program called Psychological Capital Intervention (PCL), psychological capital has the potential to grow and develop at the theoretical/experimental level (Lotanze et al, 2006, 2007). Moreover, unlike traditional capital (i.e. human capital and social capital) and tangible assets, psychological capital is materialized by little investment (Lotanze et al, 2007). In a study with experimental groups, Hadgez (2010) showed that training courses on psychological capital had significant impact on contribution and operational performance. Interventions related to the development of psychological capital in online training courses have been pilot-tested and produced favorable results (Lotanze et al, 2008). For example, Lotanze et al (2007) stated that micro level interventions of psychological capital have at least 10 percent influence on performance.

In 20<sup>th</sup> century, with the emergence of large and multi-national firms, development of the concept of separation of ownership and management, and the conflict of interests between the owners and managers, assessing the performance of firms and managers has become an interesting topic for various groups such as creditors, owners, government and even managers. In this regard, by conflict of interest it is meant that managers always do not move in the direction of maximizing stakeholders' interests. Stakeholders can adjust the conflict of interests through paying salaries and benefits proportionate to the managers' performance or paying the supervision costs to limit irrelevant actions and activities of managers (Nourvash & Heidari, 2005). Using performance assessment systems is another way to deal with the conflict of interests between managers and stakeholders. Performance assessment is an important part of any management control system. Creating a strategic program and controlling decisions require some information about the performance of different units of a firm. In order to enjoy more effectiveness, performance measurement and reward giving should

motivate managers and other employees of the firms in all the levels to achieve pre-set goals and to have a better performance (Fathi, 2008). Performance of firm is defined as the external criteria of firms' effectiveness, which incorporates three general areas of 1) financial performance (profit, return on assets, return on investment); 2) market performance (sales, market share, etc.); and 3) return on equity (total return on equity, economic value added (EVA), etc.). In measuring firms' performance, theoreticians believe that there is a fundamental difference between market-based criteria and financial performance criteria. Although, in most cases there is a significant relationship between market share (one of the most important indices of market performance) and profitability (one of the most important indices of financial performance), in some cases such as the context of market penetration, this relationship will not necessarily be positive and significant. Therefore, unlike the fact that many of researchers usually do not differentiate between these two types of indices, distinguishing market-based criteria and financial performance criteria is one of the most important actions in the course of assessing the firms' performance.

## Literature and Theoretical Foundations

Opposite effects of productivity in capital structure include two hypotheses: (a) risk-return hypothesis, and (b) right to use the brand hypothesis. Productivity of the external validity of these hypotheses is tested using the regression model. This way the role of ownership structure and the type of capital structure and firms' performance will be examined and it will be revealed that ownership structure and the type of capital structure have a direct relationship with the firms' performance (Margaritis et al, 2011).

The economic value added (EVA) has been explored three years before acquisition and integration processes and four years after these processes, and results of the study have been presented based on the short and long-term performance of EVA. According to these results, short-term performance of the acquired and integrated Chinese firms has improved and is statistically significant, while improvement on long-term performance has not been substantial and significant (Lgang & Jigang, 2015).

The effect of the type of ownership, free cash flow (FCF) and diversification strategy (DS) on the performance of the firms listed in Tehran Stock Exchange during 2007 to 2012 showed that based on the screening method and after omitting irrelevant observations the sample size equals to 110 firms. FCF and DS were considered as independent variables in order to examine their effects on the firms' performance. In this study which used integrated data and panel data with fixed effects, results of data analysis, using multivariate regression at the confidence level of 95% for 110 firms during 2007 to 2012, show that variables of the type of ownership, FCF and DS have a direct and positive influence on the firms' performance. Moreover, these results show that regarding the intensity of influence, FCF has the greatest amount of positive influence on firms' performance (Yaghoubi, 2014).

The effect of organizational climate through social capital on the organizational performance of employees working in five districts of municipality of Rasht city has assessed the indirect relationship between organizational climate and organizational performance in addition to investigating the effect of social capital on organizational performance. This study was conducted with a sample of 132 employees working in the five districts of municipality of Rasht city. This is a descriptive and correlational-survey study. Questionnaires were used to collect data and data analysis was done through structural equation modeling (SEM) in LISREL Software. Results of this study show that organizational climate has a positive and significant impact on social capital in a direct way and on organizational performance in an indirect way. Moreover, social capital has a positive and direct impact on the organizational performance (Norouzi et al, 2015).

Examining the relative and increasing informative content of EVA, cash value added (CVA), accounting profit and cash flow from the operation and stock returns, it was found that the accounting profit has the highest relationship with stock returns. Moreover, accounting profit has increasing informative content compared to other variables. EVA and CVA have significant relationship with stock returns, and in some cases, they have increasing informative content. Cash flow from the operation has neither a significant relationship with stock returns nor has increasing informative content (Nourvash & Mashayekhi, 2004).

Examination of the relationship between operating cash flow, operating profit and EVA with the wealth created for stakeholders assesses the validity of these indices in Tehran Stock Exchange. Results of the study showed that in the firms listed in Tehran Stock Exchange, EVA is a better predictor of CSV and is able to show the stakeholders that how much the management is involved in their wealth. One of the other findings of this study is that accounting indices that have been used till now are insufficient and they cannot tolerate the increasing challenges facing the capital markets and owners, and EVA is an index which can take the place of the other indices in assessing the management with regard to its major goal, which is in fact maximizing the stakeholders' wealth (Nourvash et al, 2004).

## Methodology

All the subsidiary firms of Parsian Bank in Tehran Stock Exchange during 2007 to 2013 form the population of this study. The required data were extracted from computer data banks, the library of stock exchange, and also by using Rahavard Novin Software and visiting the website of [www.rdis.ir](http://www.rdis.ir), which belongs to the Stock Exchange Organization

(the management of research, development and Islamic studies). Moreover, instruments of the study consisted of financial statements of companies, including balance sheet, cash flow statement and financial statements' enclosed the end of each fiscal year (19<sup>th</sup> March).

In the present study, multivariate regression with mixed data was used. Multivariate regression model is as following:

$$ROA_{it} = \beta_0 + \beta_1 SC_{it} + \beta_2 Hope_{it} + \beta_3 Optimism_{it} + \beta_4 Resilience_{it} + \beta_5 Leverage_{it} + \beta_6 Firm Size_{it} + \varepsilon_{i,t}$$

$ROA_{it}$  = the operational performance which is measured through return on assets. Return on assets is calculated from the proportion of net profit to the book value of assets.

## Independent Variables

Independent variables are those which influence other variables. An independent variable is a feature of the physical or social environment which, after being selected and intervened by the researcher, receives values so that its impact on other variables is examined.

## Psychological Capital

psychological capital is a positive and developed state of psychology which has the following features: commitment and making required effort to succeed in performing challenging tasks (Self-confidence); positive reference to present and future successes (Optimism); perseverance in achieving a goal, and changing the path to achieve this goal if necessary (Hope); perseverance in the face of difficulties and problems of achieving success (Resilience) (Lotanze et al, 2007). So, psychological capital consists of self-confidence, hope, optimism, and resilience.

## Findings

Financial leverage can have the highest positive impact on increasing operational performance, because it has a mean of .668 and the lowest standard deviation (SD), and this reflects the fact that the dispersion around its mean has been very little. Moreover, dispersion around the mean of the firm size is the greatest because it possesses high standard deviation of 456.294.

Furthermore, these findings suggest that self-confidence, hope, optimism, and resilience have a mean of .575, .488, .482 and .462 respectively. Optimism with the standard deviation of .872 has the highest dispersion around the mean, and self-confidence with the standard deviation of .678 has the lowest dispersion around the mean (see Table 1).

**Table 1: Descriptive statistics of the variables of the study**

Variables descriptions	Mean	Mode	SD	Min	Max
ROA	0.186	0.177	0.128	-0.199	0.545
SC	0.575	0.511	0.678	0.1089	0.776
Hope	0.488	0.453	0.883	0.1012	0.833
Resilience	0.482	0.447	0.872	0.1332	0.798
Optimism	0.462	0.428	0.835	0.1570	0.764
Leverage	0.668	0.702	0.179	0.498	0.938
Firm Size	21.356	20.420	456.294	18.177	23.572

To examine the stability or reliability of the variables of the study, Im, Pesaran and Shin's test (IPS) (1997) was employed.

Since the P-value for all the variables is under 0.05, these variables have been in a reliable state during the study. The results of IPS test show that the mean and variance of variables have been stable over time and their covariance was constant during different years. Therefore, use of these variables in the model does not introduce spurious regression.

**Table 2: Im, Pesaran and Shin test (IPS)**

variables	W-stat	p-value
ROA	56.711	0.0040
SC	54.359	0.0038
Hope	0.321	0.0000
Resilience	83.233	0.0059
Optimism	80.921	0.0057
Leverage	53.480	0.0038
Firm Size	12.860	0.0009

An important issue that we come across in econometrics is the issue of heteroscedasticity. Heteroscedasticity means that in estimating the regression model, the values of the error terms have unequal variances. White test was used to estimate the heteroscedasticity. The results show that F-statistics of the regression model of the study are not significant at the error level of 0.05; therefore, the null-hypothesis, which implies the presence of the heteroscedasticity among the data of the model at the error level of 0.05, is rejected. Thus, the regression model of ordinary least squares (OLS) can be employed.

**Table 3. Results of heteroscedasticity**

Regression model of the study	W-stat	p-value	Result of the test
	2.238	0.207	Lack of heteroscedasticity

Given the results obtained from the fitted regression equation (Table. 4), the value of F-statistics (13.675) reflects the significance of the whole regression model. The coefficient of determination and the adjusted coefficient of determination are 51.8% and 44.9% respectively. Therefore, it can be concluded that in the above-mentioned regression model, only about 44.9% of the changes in operational performance (i.e. return on assets) is explained by independent and control variables.

**Table 4. The results of the fitted regression equation**

variable	Coefficient of variable	Value of coefficient	t-statistics	Level of significance
Constant	$\beta_0$	1.709	2.909	0.002
SC	$\beta_1$	0.867	2.302	0.041
hope	$\beta_2$	0.392	3.121	0.0089
resilience	$\beta_3$	0.678	3.432	0.0097
optimism	$\beta_4$	0.534	2.809	0.031
Leverage	$\beta_5$	0.422	1.124	0.467
Firm size	$\beta_6$	0.978	2.418	0.0036
Coefficient of determination	0.518	F-statistics		13.675
Adjusted coefficient of determination	0.449	p-value (significance)		0.0015
		W-stat		1.753

Based on the above table, the components of psychological capital have an impact on the operational performance of the subsidiary firms of Parsian Bank. According to this table, the significance level of the components of psychological capital, including self-confidence, hope, optimism, and resilience, is lower than the intended significance level for the present study (5%). Moreover, the absolute value of t-statistics of these variables is larger than the t-statistics obtained from the table with the same degree of freedom. Therefore, the H. hypothesis is rejected at the confidence level of 95% and the main hypothesis, implying that the components of psychological capital have an impact on the operational performance of subsidiary firms of Parsian Bank, is supported.

## Conclusion and Discussion

Psychological capital is a positive and developed state of the psychology which has the following features: commitment and making the required effort to succeed in performing challenging tasks (Self-confidence); positive attitude towards present and future successes (Optimism); perseverance in achieving a goal, and necessary, changing the path to achieve this goal (Resilience); and perseverance in the face of difficulties of achieving success (Hope) (Lotanze et al, 2007). Although, these components may literally sound very similar and interchangeable, the literature of psychological capital and the positivist organizational behavior differentiates between these concepts, and the experimental analyses show significant differences among them. Psychological capital, in fact, refers to the concept of “who you are” (the real self) and “who you want to be” (possible self) on a developmental and growing basis. Psychological capital is something beyond the human capital and social capital and this has also been proven in research studies. As an example, it has been found that psychological capital may provide more attitudes about positive job attitude towards the well-known approaches of human and social capital. Moreover, compared to these two capitals, psychological capital is a better provider of the commitment and job satisfaction for employees. The results of experimental studies show that psychological capital has the potential of growth and development both theoretically and experimentally through performing the intervention program called PCI. Moreover, unlike traditional capital (i.e. human and social) and tangible assets, psychological capital is materialized with little investment (Lotanze et al, 2007). In a study with experimental groups, Hodgez (2010) showed that training courses on psychological capital have a significant impact on organizational contribution and performance. These interventions related to the development of psychological capital in online training courses have been pilot-tested as well and produced some positive results (Lotanze et al, 2008).

Results of the present study are in line with the findings of studies done by Hodgez (2010), Lotanze et al (2006, 2007, and 2008). Findings of these studies reflected the positive impact of psychological capital on the results and performance of firms, and showed that the level of psychological capital of employees of the organization can be increased using different approaches and interventions. According to the findings of the present study, that imply a direct impact of the components of psychological capital (self-confidence, hope, optimism, and resilience) on the operational performance of subsidiary firms of Parsian Bank, it is recommended to managers and authorities of Parsian Bank and its subsidiary firms to employ the components of psychological capital in order to improve and increase the operational performance of subsidiary firms.

## Suggestions for Further Research

To examine the impact of organizational culture on the operational performance of subsidiary firms of Parsian Bank.

To examine the relationship between psychological capital and operational performance of subsidiary firms of Parsian Bank.

To examine the relationship between commitment to social responsibility and operational performance of subsidiary firms of Parsian Bank.

To examine the impact of the quality of internal controls on the operational performance of subsidiary firms of Parsian Bank.

To explain the relationship between psychological capital and organizational entrepreneurship in subsidiary firms of Parsian Bank.

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