MEDIATING ROLE OF INNOVATION & MAEKRT- ORIENTATION IN THE RELATIONSHIP BETWEEN KNOWLEDGE MANAGEMENT & FINANCIAL PERFORMANCE: A CASE STUDY OF SMALL & ENTERPREREUR BUSINESS

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Abstract
The aim of this study was to investigate the role of innovation and market-orientation components in the relationship between KM and financial performance. Therefore, for this purposes, correlation and path analysis technique is used. The population of this study is set of small and entrepreneur industrial companies and data collection tools included: study of literature, interviews with experts and Dwairi et al’ questionnaire (2007). The nature and purpose of the study is applied survey and in terms of methods for data collection is descriptive survey. 190 questionnaires were distributed among managers and entrepreneur working in small firms in industrial parks in June, 2013. In this study, structural equation modeling and partial least squares method is used to test the hypothesis and fitness models. With confirm the hypothesis testing, a significant positive relationship between innovation and market-orientation and knowledge management, and financial performance in the fitted model have been proved.

Keywords: INNOVATION - MAEKRT- ORIENTATION - KNOWLEDGE MANAGEMENT - FINANCIAL PERFORMANCE - SMALL & ENTERPREREUR BUSINESS.

1. Introduction
Today, companies to survive in turbulent and dynamic global market use several approaches, including market-orientation, knowledge management, innovation- orientation technology- orientation, employee- orientation and etc. Each of these approaches may cause the increase in organization performance, but knowledge management had more effect on organizational performance than other strategic trends. Many studies has been verified the relationship between knowledge management and organizational performance, the impact of knowledge management on organizational performance. The major challenge about knowledge management and organizational performance is that in some research has proved that the knowledge management, do not directly enhance organizational performance. This challenge is due to the influence of mediating role of other strategic trends on the relationship between knowledge management and organizational performance. These variables that have a mediating role in the relationship between knowledge management and organizational performance are market-orientation and innovation-orientation. Studies generally confirm the relationship between these variables, but the fundamental challenge is direction and type of relationship (positive or negative) between these variables. Literature on knowledge management, consider innovation as a critical factor for companies to create value and sustain competitive advantage in today's highly complex and dynamic world (Gold et al, 2001). In conclusion, this study sought to determine the type and direction of relationship between market-orientation, innovation, knowledge management and organizational performance.

2. Literature
Knowledge as an important source of competitive advantage and value creation known as an essential element for sustainable development and in general, as a determining factor for companies with global aspirations. In addition, the knowledge that companies identify is a dynamic resource that requires careful management and nutrition (Subramaniam&Youndt, 2005). Many researchers are introduced detailed knowledge in the form of
4 general level (data, information, knowledge, and wisdom). While organizations is not assessing their knowledge assets, knowledge management will not acknowledge performance management and organizational development (Longbottom & Chourides, 2001). Though knowledge management has been recognized as a tool used by managers to increase efficiency, effectiveness and innovation, is being developed generally as accepted principles of knowledge management. This is because often, organizations are employing knowledge management practices that are well established (Madhavan & Grover, 2009; Gold, et al., 2001). Analyzing definitions of knowledge management shows that many of them have one similarity: that the knowledge management leads to improved organizational performance. Today, all organizations, large and small, in order to remain competitive need to implement knowledge management in their organizations. Knowledge management is the way through which organizations are create, acquire, classify, modify, share and publish knowledge. Many researchers believe that knowledge management is transform data into information and information into the knowledge (Vaccaro, et al, 2010; Gottschalk, et al, 2007). Gloet & Terziiovski (2004) define knowledge management as: to recognize the experience, knowledge and expertise that creates new ability and capacity, encourage innovation and enhance customer value.

Parlby & Taylor (2002) belief that the knowledge management supports innovation, creating new ideas and exploit the power of thought in the organization. Research showed that knowledge management play an important role in innovation process in the organization through the creation of useful and valuable culture for creating and sharing knowledge and also creating culture of collaboration in organizations. Scholars are emphasized on the critical role of knowledge management specially in creating an internal working environment that supports creativity and innovation. Gloet suggests there is positive and significant relationship between knowledge management and innovation performance in organizations. It is worth mentioning that the innovation performance that helps organizations in product and process innovation known as competitive advantage (Xu & Li, 2009). So we must attempt for the implementation of knowledge management in organization in order to create a common culture for maximizing innovation performance and to create effective competitive advantage (Ibarra, 1993; Xu and Li, 2009).

Definition of performance has been entered with wide applications in business strategy theory. Ford & Schellenberg (1982) introduced three perspectives of organizational performance: performance by achieving the objective (objective approach), performance through the skills of organization to secure scarce and valuable resources (resource based approach) performance definition in terms of behavior of organization participants (process approach). In Venkatraman & Rampanjam’ (1986) point of view performance is a subset of the overall effectiveness of the organization and consists of operational and financial factors. Researchers in studies related to the performance are used various components to measure it. Pelham (1997) classified performance in three categories: organizational effectiveness, growth of share and profitability. Also classified the performance parameters in two categories of market performance, including customer retention and attract new customers and financial performance, including return on assets rate, market share, sales growth.

The different criteria used to measure performance, and there is no fixed procedure or similar in this area. The usual way of assessment is: first, several factors associated with the performance was selected and then each of component was measured in an objective or subjective method, by a question (Chaganti, et al, 1989; Kohli, et al, 1993). There is an important distinction between objective and subjective measures of performance. Objective measures that are truly quantitative, is financial measures and have been collected, directly from organization or through secondary sources of data. Subjective scales are judgment scales that respondents conducted inside or outside, and often consist of both financial and non-financial measures (Vytlacil, 2010).

Kara, et al., (2005) are organized consequences of market orientation in four categories: organizational performance, customer achievements, innovations achievements and employees achievements. Marketing strategy literature suggests that market orientation through the sensitivity to market and customer relationship, providing capabilities that will lead to superior organizational performance. Organizational performance has been established of cost-based performance measures that reflects the performance after the calculation of a strategy and the components of earnings-based performance measures, does not calculate the cost of implementing a strategy (Kohli, et al, 1993, 1996). Market-orientated organizations increase customer satisfaction and loyalty because they are in the best position to predict customer needs and provide good products and services are needed, (Narver, et al, 1998). Innovation outcomes are consist of skills to create and implement innovative ideas, products and new processes and new products performance. Because the market-orientation tends to lead to a permanent position and is more active in meeting customer needs, and emphasize on the use of more information, increase innovation and improve the performance of new products (Gokus, 1994). About achievements of staff, Kohli and Jaworski, (1990) argued that the market-orientation, increases commitment, team spirit, customer orientation and job satisfaction, through induction of pride and loyalty among employees. Also market-orientation can reduce the conflict of role as incompatibility communication expectations that hinder employee performance. (Gokus, 1994).

that 36 studies have been conducted on the relationship between market orientation and most of these studies correlate positively with the number of performance scale. In the Dwairi, et al (2007) Market orientation results organizational performance and relationship between market-orientation and performance is based on logic that market-orientation refers to better meet customer needs in a ways that lead to better respond to customer and thus be reflected in organizational performance. So the more market-orientation by an organization the better view of customer needs and causing organizations to gain more profit rather than nonmarket-oriented organization (Huseman, 2010). Slater and Narver (1996) have emphasized that understanding the relationship between marketing as a culture (ie, market-orientation) and marketing as a strategy to increase the value of market-orientation share are important in organizational effectiveness. Marketing concept states that organizations that meet the hidden and unexpressed needs of customers better than competitors, acquire higher performance.

Business performance in the market-orientation research, generally defined as a mental construct that mixed financial measures and market-based measures, or both together as one. Financial measures are generally are reflected based on Narver and Slater (1998) are included the volume of sales or sales growth, profitability and return on investment. Variety of scales based on market is very broad and includes, the success of new products, market share, image of the organization and brand value. While Kohli and Jaworski (1993) used a single scale for all performance, many studies have used multi item measures mostly consist of both financial measures and market-orientation scales (Slater and Narver, 1994; Deshpandé, et al, 1993). Most of studies that examine the relationship between performance and market-orientation, employ subjective measures of business performance: because these measures include information about the business unit that is not easily accessible or confidentially available for organizations, and they do not want to share this information. However, Dawes (1999) argues that there is strong relationship between subjective and objective measures of business performance in the market-orientation research.

Neil, et al (2009) using both traditional resource-based theory and marketing capabilities, examined the role of marketing capabilities and market-orientation's performance of many different industries. The results showed that the market-orientation and marketing capabilities have a direct impact on performance. Kara et al (2009) by using measures of Kohli and Jaworski interviews with retailers of service companies showed that there is a significant relationship between market-orientation and behavioral approach and performance.

3. Research hypotheses

1. Knowledge management has a positive and significant effect on the financial performance of insurance companies.
2. Knowledge management has a significant and positive effect on innovation in the insurance company.
3. Knowledge management has a significant and positive effect on market-orientation in insurance companies.
4. Innovation is mediated the relationship between knowledge management and financial performance of insurance companies.
5. Market-orientation is mediated the relationship between KM and financial performance of insurance companies.

4. Data analysis and hypothesis testing

The nature and purpose of the study is applied and in terms of methods for data collection is descriptive survey. 190 questionnaires were distributed among the directors of companies in the industrial parks, the 21 questionnaires were incomplete and unusable, at the end the analysis on the 169 complete questionnaires was conducted. In this study the researcher to test hypotheses four operational variables is used and variables measuring knowledge management, market-orientation, innovation and financial performance measured by Dwairi et al’ questionnaire indicators(2007), is used. In this study, structural equation modeling and partial least squares (PLS) model was used to test the hypothesis and fitness. PLS is variance-based approach that in comparing with similar techniques of structural equation such as LISREL and AMOS requires fewer conditions (Liljander et al, 2009). For example, unlike LISREL, PLS path modeling is more suitable for real applications, especially when the models are more complex or distribution of data is abnormal, the use of this approach would be more appropriate (Wen Wu, 2010). The main advantage of PLS modeling over LISREL is that it requires a smaller number of samples (Wixom & Watson, 2001), although relatively large sample size used in this study. The PLS will consider two models simultaneously, the external model (measure model) that reveals the relationship between hidden and obvious variables and internal model (structural model), that measure the relationship between hidden variables with the other hidden variables (Wen Wu, 2010).
5. Findings

5.1. Descriptive statistic

Table 1: Statistical characteristics of the study population

<table>
<thead>
<tr>
<th>Age</th>
<th>Degree</th>
<th>Gender</th>
<th>Characteristic</th>
</tr>
</thead>
<tbody>
<tr>
<td>56 &amp; above</td>
<td>46-55</td>
<td>36-46</td>
<td>25-35</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>73</td>
<td>20</td>
</tr>
<tr>
<td>0/6</td>
<td>49/7</td>
<td>37/3</td>
<td>12/4</td>
</tr>
<tr>
<td>92</td>
<td>8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In employees and managers of population the characteristics variables such as gender, age, educational level of respondents was discussed. The results indicate that 92% of respondents were male and 8% were female. According to data most of the organizational spectrum is in the range of 36 to 45. From the respondents 12.4% have Associate Degree and lower education, 37.3% have bachelor degree, 49.7% have MA and 6 percent have Ph.D degree and above. In terms of duration, brokerage firms, approximately 30 years old and have at least 2 years experience. In Table 2 the number of designed measures to measure each latent and Cronbach's alpha coefficient and composite reliability of question was shown.

Table 2: Cronbach's alpha coefficient of research measures

<table>
<thead>
<tr>
<th>Composite Reliability</th>
<th>Cronbach's alpha coefficient</th>
<th>Scale type</th>
<th>Measure</th>
<th>Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>0/862</td>
<td>0/814</td>
<td>Likert five point scale</td>
<td>Our company has always tried to create new knowledge for use in the organization. Ideas and new knowledge will be welcomed by our company. Our company have the process of distributing new knowledge among different departments. Our company has scheduled reward system for sharing new knowledge among employees. Our company are carried out activities in order to facilitate knowledge sharing among employees. We act fast in our understanding of the fundamental changes in our industry like competitors, technology and regulation. If an important event for key customers or markets occurs, all of our units are aware of it in the shortest time. Line and staff departments planned as periodically to respond to environmental changes occurred. In our company emphasis on innovation activities, research and development is a culture. The company is introducing new products and services frequently. Our bank support th innovation in product development and services. Investment revenues have increased over the previous year. Our profits have increased compared to last year We've increased our market share compared to previous year Our company is more profitable than its competitors.</td>
<td></td>
</tr>
<tr>
<td>0/817</td>
<td>0/888</td>
<td>Likert five point scale</td>
<td>Knowledge management Market-orientation Innovation Financial performance</td>
<td></td>
</tr>
<tr>
<td>0/944</td>
<td>0/912</td>
<td>Likert five point scale</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0/862</td>
<td>0/786</td>
<td>Likert five point scale</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As can be seen, the alpha coefficient reliability and composite reliability of all variables in this study, is more than the minimum value of 0/6 (Nunnally, 1978), and 0/65 (Lee & Kim, 1999). To assess the reliability of each indicators of latent variables, that in the PLS model is determined by the factor loadings of each indicator, the value of each latent variable factor loadings of the indicators should be greater than or equal to 0/5, (Falk & Miller, 1992). Table 3 showed the factor loadings for indicators of latent variables.
As shown in the above table all measure amounts related to latent variables that are shown in shaded houses are above 0/05. Therefore can be said that, the measurement model have sufficient reliabilities in the latent variables indices. In the table above the possibility values for these indices are shown. Usually these values are introduced as validity parameters related to confirmatory factor analysis, because the relationships between indicators and latent variables have already been identified. As can be seen all probability values are less than 0/05 and the research instrument is valid and appropriate.

In addition, the factor loadings are presented in the table above can also be used to evaluate the convergent validity of the instrument. An instrument has convergent validity if questions (indicators) associated with each latent variable be perceived by the respondent as intended designer of the questions. To demonstrate the convergent validity of the instrument two criteria must be met: first, the values of probability is less than 0/05 and the values of the corresponding factor loadings is greater than or equal to 0/5. As shown in Table 4 in the present study both criteria of the instrument fulfilled and the research questionnaire has good convergent validity. Also the convergent validity (credibility) in the PLS model is analyzed by Average Variance Extracted. The index indicates the amount of variance that a construct (latent variable) of gets from their indicators. Forni and Lacker (1981) suggest for this criteria values greater than 0/5 because this value ensured that at least 50% of the variance of a structure is defined by their indicators. Then the results of investigation of convergent validity the study was present. As shown in Table 4. All values of average variance extracted are greater than 0/05 so the convergent validity of the measurement model is adequate.

### Table 3: Value of latent variable factor loadings

<table>
<thead>
<tr>
<th>Probability</th>
<th>Financial performance</th>
<th>Innovation</th>
<th>Market-orientation</th>
<th>Knowledge management</th>
<th>Latent variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;0/05</td>
<td>0/678</td>
<td>0/588</td>
<td>0/740</td>
<td>0/830</td>
<td>KNO1</td>
</tr>
<tr>
<td>&lt;0/05</td>
<td>0/556</td>
<td>0/622</td>
<td>0/446</td>
<td>0/868</td>
<td>KNO2</td>
</tr>
<tr>
<td>&lt;0/05</td>
<td>0/432</td>
<td>0/639</td>
<td>0/729</td>
<td>0/853</td>
<td>KNO3</td>
</tr>
<tr>
<td>&lt;0/05</td>
<td>0/566</td>
<td>0/578</td>
<td>0/414</td>
<td>0/872</td>
<td>KNO4</td>
</tr>
<tr>
<td>&lt;0/05</td>
<td>0/511</td>
<td>0/619</td>
<td>0/763</td>
<td>0/920</td>
<td>KNO5</td>
</tr>
<tr>
<td>&lt;0/05</td>
<td>0/696</td>
<td>0/680</td>
<td>0/919</td>
<td>0/811</td>
<td>INN1</td>
</tr>
<tr>
<td>&lt;0/05</td>
<td>0/622</td>
<td>0/637</td>
<td>0/908</td>
<td>0/555</td>
<td>INN2</td>
</tr>
<tr>
<td>&lt;0/05</td>
<td>0/639</td>
<td>0/676</td>
<td>0/939</td>
<td>0/790</td>
<td>INN3</td>
</tr>
<tr>
<td>&lt;0/05</td>
<td>0/578</td>
<td>0/909</td>
<td>0/460</td>
<td>0/341</td>
<td>MO1</td>
</tr>
<tr>
<td>&lt;0/05</td>
<td>0/522</td>
<td>0/903</td>
<td>0/618</td>
<td>0/389</td>
<td>MO2</td>
</tr>
<tr>
<td>&lt;0/05</td>
<td>0/572</td>
<td>0/898</td>
<td>0/626</td>
<td>0/744</td>
<td>MO3</td>
</tr>
<tr>
<td>&lt;0/05</td>
<td>0/820</td>
<td>0/516</td>
<td>0/539</td>
<td>0/562</td>
<td>PER1</td>
</tr>
<tr>
<td>&lt;0/05</td>
<td>0/757</td>
<td>0/481</td>
<td>0/421</td>
<td>0/648</td>
<td>PER2</td>
</tr>
<tr>
<td>&lt;0/05</td>
<td>0/752</td>
<td>0/498</td>
<td>0/422</td>
<td>0/487</td>
<td>PER3</td>
</tr>
<tr>
<td>&lt;0/05</td>
<td>0/792</td>
<td>0/428</td>
<td>0/612</td>
<td>0/252</td>
<td>PER4</td>
</tr>
</tbody>
</table>

### Table 4: Convergent validity of the research constructs (latent variables)

<table>
<thead>
<tr>
<th>Financial Performance</th>
<th>Innovation</th>
<th>Market-Orientation</th>
<th>Knowledge Management</th>
<th>Latent Variable</th>
<th>Convergent Validity</th>
</tr>
</thead>
<tbody>
<tr>
<td>0/609</td>
<td>0/851</td>
<td>0/87</td>
<td>0/77</td>
<td>average variance extracted</td>
<td></td>
</tr>
</tbody>
</table>

5.2. Hypothesis test results

As seen in Figure 1, the path coefficient for the relationship between KM and financial performance were 0/214. Given the likelihood that is lowered than significant level of 0/05. In fact, the number of significant level is larger than the 1/96 (Figure 2). It can be concluded that the coefficient of error 0/05 it means that KM and financial performance have a significant impact. Therefore, we can conclude that about 21% of the changes in the financial performance is explained by the knowledge management and this is significant amount. In other words, according to the coefficient β determined that if aknowledge management unit change, the financial performance changes 21 units. In relation to the second research hypothesis, the path coefficient for the relationship between two variables, knowledge management and innovation, were calculated 0/733. Given the likelihood that is lowered than significant level of 0/05. In fact, In fact, the number of significant level is larger than the 1/96(Figure 2). It can be concluded that the coefficient of error 0/05 is statistically significant and knowledge management has a positive and significant impact on innovation. Therefore, we can conclude that about 73% of the variation of innovation is explained by knowledge management and this is a significant

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amount. In other words, according to the coefficient $\beta$ if knowledge management change a unit, innovation change 73 unit.

In relation to the third research hypothesis, the path coefficient for the relationship between two variables market-orientation and KM were calculated 0/654. Given the likelihood that is lowered than significant level of 0/05. In fact, in fact, the number of significant level is larger than the 1/96 (Figure 2). It can be concluded that the coefficient error of 0/05 is significant means that knowledge management has a positive effect on market-orientation. Therefore, we can conclude that about 65% of the variation of market-orientation is explained by knowledge management, and this is a significant amount. In other words, according to the coefficient $\beta$ if knowledge management change a unit, market-orientation change 65 unit.

In relation to the fourth research hypothesis: the mediating role of innovation in the relationship between knowledge management and financial performance can be deduced that because the path coefficient of the relationship between knowledge management and innovation as well innovation and financial performance is positive and significant, so the fourth research hypothesis and the mediating role of innovation in the relationship between KM and financial performance is confirmed.

In relation to the fifth research hypothesis: the mediating role of market-orientation in the relationship between knowledge management and financial performance can be deduced that because the path coefficient of the relationship between knowledge management and innovation as well innovation and financial performance is positive and significant, so the fifth research hypothesis and the mediating role of market-orientation in the relationship between KM and financial performance is confirmed.

![Figure 1. research model at standard estimation mode](image-url)
5.3. Evaluation of the model fitting

To check the quality or validity of the model, we use cross-validation which includes CV-Communality and CV-Redundancy. Communality Index, measure quality of model for each block of indicator. The CV-Redundancy index that also named Q2 Ston-Gaser, with regard to the measurement model, measures the quality of structural model for each endogenous block. Positive values of this indicators showed the appropriate quality and acceptable measurement and structural model. In Table 5 values for each of the indicators of independent and dependent variables is given. As you can see the indicators are positive and greater than zero.

<table>
<thead>
<tr>
<th>CV Red</th>
<th>CV Com</th>
<th>variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>0/443</td>
<td>0/443</td>
<td>Knowledge management</td>
</tr>
<tr>
<td>0/485</td>
<td>0/593</td>
<td>Market-orientation</td>
</tr>
<tr>
<td>0/455</td>
<td>0/658</td>
<td>Innovation</td>
</tr>
<tr>
<td>0/305</td>
<td>0/349</td>
<td>Financial performance</td>
</tr>
</tbody>
</table>

Fig 2. Research model at significant parameters mode
6. Conclusions and recommendations

Results indicate a positive relationship between market-orientation and performance. This finding is consistent with Jawrosky and Kohli (1990) and Slater and Narver (1995) research. As a result, companies need to raise their performance to by market-orientation activities. Market-orientation allow companies to develop the ability to gather and process their market information. These capabilities enhance the organization's innovation and this innovation will be improved organizational performance. The results also show that the innovation-orientation has a positive relationship with organizational performance. This finding is consistent with Baker & Sinkuka (2008) Research. Innovation-orientation increases the capability of organization in the face of environmental turbulence and increasingly complex and competitive environment and quick response to environmental challenges and providing successful new products. The results also show that the market-orientation through innovation-orientation lead to performance. These results are consistent with Nwokah (2008) and Kekin (2006) researches. As a result, if activities of market-orientation companies will lead to innovation, organizational performance can be further improved. The results obtained in this study in relationship between knowledge management and performance is similar to the result by Xu and Li (2010). They found a significant relationship between knowledge sharing and creation with innovation performance. Vaccaro et al is also (2010) in their study found a significant relationship between knowledge management and innovation.

The main limitation of this study may be the unwillingness of respondents to respond the questionnaire. Organizations need to keep pace with the rapid changes in the global arena and planning to implement knowledge management in organizations, management support for knowledge management practices and holding conferences and seminars to familiarize managers with the concept of knowledge management can improve the performance of organizations and will lead to higher competitiveness. Note that in addition to knowledge management other factors impact on performance it is proposed to future research to categorize these factors were identify and evaluate into success factors and barriers.
References


Huseman, CH. (2010), Market orientation and the markor scale: A quantitative study measuring the degree of market orientation of Illinois banks $500 million in assets and less, thesis, Capella University.


Liljander, K., Polsa, P., & Van Riel, A. (2009), Modeling consumer responses to an apparel store band: Store image as a risk reducer, journal of retailing and Consumer Services, 16, 281-290


