Environmental Uncertainty and Market Orientation on Business Performance with Innovation as an Intervening Variable: A Survey of Banking Industry in Indonesia

by Setyani Dwi Lestari

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Environmental Uncertainty and Market Orientation on Business Performance with Innovation as an Intervening Variable: A Survey of Banking Industry in Indonesia

Setyani Dwi Lestari*

Budi Luhur University, Jl. Ciledug Raya, Petukangan Utara, Jakarta Selatan, Indonesia, 12260

ABSTRACT

Objective – This causal research is aimed at obtaining information related to the effect of uncertainty environment, market orientation, and innovation in direct and indirect effect on the business performance in a holistic co-alignment perspective.
Methodology – In this research, 90 samples were randomly selected and the data were analysed by path analysis after all variables were put into the correlation matrix.
Findings –The results showed that: (1) environment uncertainty has a significant direct effect of the innovation; (2) environment uncertainty has a significant direct effect on the business performance; (3) market orientation has a significant direct effect on the innovation; (4) market orientation doesn't have a significant direct effect on business performance; (5) innovation has a significant direct effect on the business performance; (6) environment uncertainty has a significant indirect effect on the business performance but through the innovation; and (7) market orientation has a significant indirect effect on the business performance but through the innovation.
Novelty – Based on those findings, it could be concluded that any change or variation in the business performance was affected by environment uncertainty, market orientation, and innovation. Therefore, to improve variation in the business performance, environment uncertainty, market orientation, and innovation should be put into strategic planning in the banking industry in Indonesia. However, other variables are necessary to be taken into account in the next research.
Type of Paper: Empirical

Keywords: Environmental Uncertainty; Market Orientation; Business Performance; Innovation.
JEL Classification: G21, L15, M31.

1. Introduction

Consolidation of the banking industry started in 2004 with the advanced market driven approach that is more pro-market called market orientation. Banking consolidation aims to encourage banks to have high competitiveness so they are able to support economic growth and face globalization and external challenges that are increasingly complex. According to Craven and Piercy (2015), an organization is referred to as market-driven if the organization implements the strategy of customer-value-centred supported by market orientation. Market orientation is an aspect of culture in an attempt to motivate employees throughout the organization and puts a high priority in creating profit and maintaining superior customer value. Slater and Narver (1994) stated that in the first generation, market-oriented businesses traditionally focus on how to understand the needs of customers in the markets it serves.

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A market-oriented corporate culture is seen as an essential element in the creation of superior corporate performance (Han et al., 1998) and for continuing to provide superior value to its customers (Baker & Sinkula, 1999). There has been a lot of literature dedicated to studying whether the market orientation results in a superior organizational performance. Agarwal et al. (2003) in their research proved that there is a positive relationship between market orientation with performance judgmental and objective performance. The relationship between market orientation, implementation strategies and performance are a perfect relationship in the context of the social environment. Market orientation is conducted by the organization to help management to develop innovations in order to obtain a competitive advantage that has an impact on business performance excellence (Day, 1999). Market orientation can create the organization's ability to anticipate customer needs and raise the ability of innovation in ideas, products and services, and a new system based on the knowledge gained from market information (Leonard, 1995). Atuahene-Gima (1995) added that as a business strategy, market orientation is difficult to understand and to be imitated by competitors and it can grow a competitive advantage. Craven and Piercy (2015) confirmed that market orientation is strongly connected to the innovation and new services and it ensures a greater market intelligence and market information.

Tidd et al. (1997) said that innovation means introducing and creating new combinations in terms of results of production factors, realized in the form of new goods, new production methods, new sales markets, new sources of procurement, and how to set up the new operation. Based on the Rogers innovation theory, innovation is an idea, items, procedures, or systems that perceived "new" by those who adopt it (Lundblad, 2003). Innovation in the organization is not merely introducing a new product, but something that is continuously bonded in a practice that is expected to reach probabilities that will find a better process or new product (Utterback, 1996). This innovative concept is alive and flexible, or in other words can make adjustments to the different circumstances in a dynamic environment (Utterback, 1996). The definition of the word innovation that is mostly found in the literature is the "process of creating new products, services, processes, or a new system". Calantone et al. (2002) examined the development of new products and Kodama produced a guide for the development of new products and services. De Jong (2003), in his writings on new service development, stated that an attempt is said to be an innovation if it constitutes or includes two main activities, namely: to develop and implement "something new".

Dess and Beard (1984) defined environmental uncertainty as a dynamic business environment (Dynamism) and it has limited resources (munificence) of elements of technological, economic, regulatory, and market. The indicators are the use of technology, regulatory, economic and market information (customers and competitors). The factor of modern technology (Internet / on-line), the relevant regulation, interest rates, changes in customer demand and the actions of competitors and the availability of resources will greatly affect the organization's activities in the relevant industry. Mathis and Jackson (2015) added that environmental uncertainty is the external environment which affects the operation of the organization in terms of technology, regulatory, economic, and social. Dobni and Luffman (2003) emphasized that environmental uncertainty is the situational environment that affects the organization's strategy by hinting indicators technology dynamics and market dynamics (customers and competitors).

Ford and Schellenberg (1982) presented three main approaches that are often used in conceptualizing organizational performance: (1) Goal approach that defines the performance of purpose shown by the behaviour of members of the organization; (2) System resource approach that defines organizational performance by assessing the organization's internal and external factors determining the survival of the organization; and (3) Constituency approach that defines the organization's performance to meet the needs of internal and external constituents of the organization. Venkatraman and Ramanujam (1987) suggested that researcher's strategies emphasize performance as Business Economic Performance, where business performance is included in Goal Approach and a central concept in the realm of management. Many previous studies measuring business performance can be seen on the financial performance or non-financial performance. Rose (1999) explained that the banking industry in various countries uses ROI and ROA as important measurements of bank profitability, but Narver and Slater (1994) stated that ROI is the performance measurement which is most widely used. The banking industry is heavily regulated by the regulatory authorities BI (2014), including how to measure financial performance.

In previous studies related to environmental uncertainty, market orientation, innovation, and performance, there are still some important issues which have not been revealed. Almost all of the studies are not aware that a company may not always be successful only by innovating. Firm innovation has to be tested in the market in defending the firm in the environmental uncertainty and it must exceed the performance of its competitors to create a sustainable competitive advantage (Noe et al, 2008). This study discusses the ideal profile for companies which want to have performance maximization by considering the scope and effect of market orientation in the implementation of the strategy. This study also discusses the market orientation and strategy related to the direction of a holistic perspective and environmental uncertainty in the market turmoil and the intensity of competition.

Figure 1 below shows that business performance is determined by market orientation and strategy by taking into account the business environment.

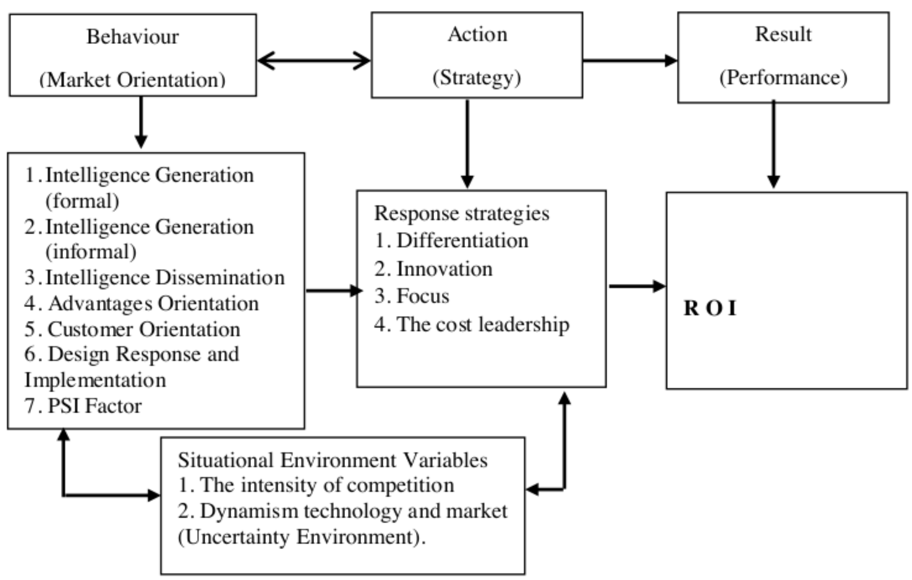

Figure 1. Theoretical Model
Source: Dobni and Luffman (2003)

According to the literature review and the theoretical model above, the hypothetical model is constructed as follows:

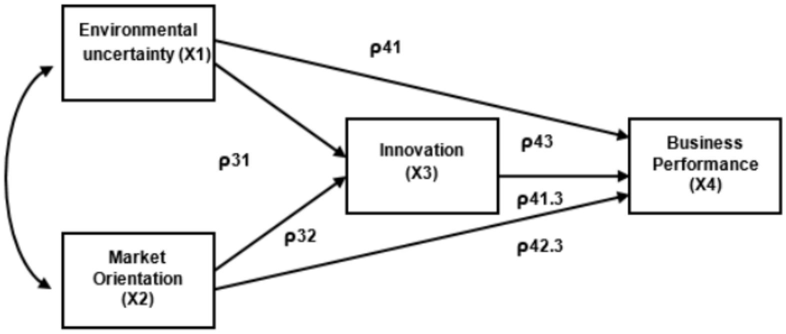

Figure 2. Hypothetical Model

Here are the hypotheses of this research:

1. There is a positive direct effect of environmental uncertainty on innovation;
2. There is a positive direct effect of environmental uncertainty on business performance;
3. There is a positive direct effect of market orientation on innovation;
4. There is a positive direct effect of market orientation on business performance;
5. There is a positive direct effect of innovation on business performance;
6. There is a positive indirect effect of environmental uncertainty on business performance through innovation;
7. There is a positive indirect effect of market orientation on business performance through innovation.

2. Methods

The general objective of this study is to analyse the direct and indirect effect of environmental uncertainty, market orientation and innovation on the business performance of the bank. The research uses a sample of banks operating in Jakarta and its surrounding areas, drawn from the population of banks in Indonesia totalling 132 commercial banks (www.bi.go.id). The research was conducted in April 2014 to June 2015. The target population of the research is 143 heads of Management leading business unit from 10 selected banks in Indonesia (PERBANAS: 12).

3. Results

3.1 Normality Test

Normality Test in this study uses the Kolmogorov-Smirnov normality test.

Table 1. Normality Test

No.	Variable	n	a statistic	a table		Result
				α = 0.05	α = 0.01	
1	Environmental Uncertainty (X1)	99	0.108	0.123	0.152	Normal distribution
2	Market orientation (X2)	99	0.074	0.123	0.152	Normal distribution
3	Innovation (X3)	99	0.074	0.123	0.152	Normal distribution
4	Business Performance(X4)	99	0.075	0.123	0.152	Normal distribution

Source: Author, 2015

The results showed that all variables, namely; environmental uncertainty (X1), market orientation (X2), innovation (X3), business performance (x4) have a statistic > 0.05, meaning that all variables have a normal distribution.

3.2 Homogeneity Test

To determine the homogeneity of the data, the statistical tests were conducted by using Bartlett test. The results were obtained as follows:

Table 2. Homogeneity Test

No	Variable	n	$\chi 2$ statistic	$\chi 2$ table		Result
				α = 0.05	α = 0.01	
1	Innovation (X3) on environmental uncertainty (X1)	99	19.137	87.108	96.827	Homogenous
2	Innovation (X3) on Market Orientation (X2)	99	17.41	88.25	98.028	Homogenous
3	Business Performance (X4) on Market Orientation (X2)	99	46.099	88.25	98.028	Homogenous
4	Business Performance (X4) on Innovation (X3)	99	21.105	89.391	99.227	Homogenous

Source: Author, 2015

All variable have $\chi 2$ statistic < $\chi 2$ table , meaning that all variables are Homogenous.

3.3 ANOVA Test

The result of ANOVA test by using Excel 2007 and SPSS 20.0 was obtained as follows:

Table 3. ANOVA Test

No	Regression	$F_{statistic}$	Sign	F_{table}	Result
1	X1 --> X3	29.898**	>	6.90	Reject Ho
2	X2 --> X3	52.575**	>	6.90	Reject Ho
3	X3 --> X4	68.180**	>	6.90	Reject Ho
4	X2 --> X4	56.205**	>	6.90	Reject Ho

Source: Author, 2015
** Significance at 0.01

Based on table 3, the result showed that the regression of all dependent and independent variables have F-statistic greater than the F-table. It means independent variables partially have an effect on the dependent variable.

1. Environmental uncertainty (X1) has a direct and positive effect on innovation (X3)
   This is the regression equation: X3 = 67.65 + 0.46 X1
2. Market Orientation (X2) has a direct and positive effect on innovation (X3)
   This is the regression equation: X3 = 46.875 + 0.584 X2
3. Innovation (X3) has a direct and positive effect on Business Performance (X4)
   This is the regression equation: X4 = 42.109 + 0.683 X3
4. Market Orientation (X2) has a direct and positive effect on Business Performance (X4)
   This is the regression equation: X4 = 43.807 + 0.634 X2

3.4 Hypothesis Testing with Path Analysis

Causal effect is calculated by using the path coefficient (ρxy). After performing calculation by using lisrel 8:54, the summary of the path coefficient calculation was obtained. Based on the pathway diagram as shown below, there are 5 (five) pieces of the path coefficients, i.e. ρ31, ρ41, ρ32, ρ42 and ρ43 and 5 (five) correlation coefficient is r13, r14, r23, R24, and R34.

Furthermore, the value of the coefficient for each path is calculated and tested by using a statistical t-test. If the lines tested showed no significant path coefficient value, the path will be removed and the structural model between variables is modified and the path coefficient value is recalculated. For the causal effect, the path coefficients (ρxy) of the variables will still be calculated. It can be seen in Figure 3 as follows:

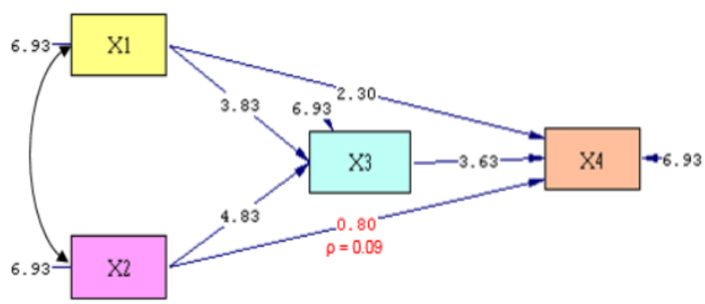

Figure 3. T-statistic and Path Coefficient ρ_{42}

3.5 Direct and Indirect Effect

Results of Path Analysis with lisrel 8:54 showing t-statistic is calculated in Figure 3. Based on Figure 4, path coefficient for ρ42 is not significant because the t-test = 0.80 <1.98 (t-table). By using Trimming Theory (Hair et al, 2015), the model is modified by removing the path that is not significant. Thus, it was then obtained the result of the analysis with new lines as shown in Figure 4 as follows.

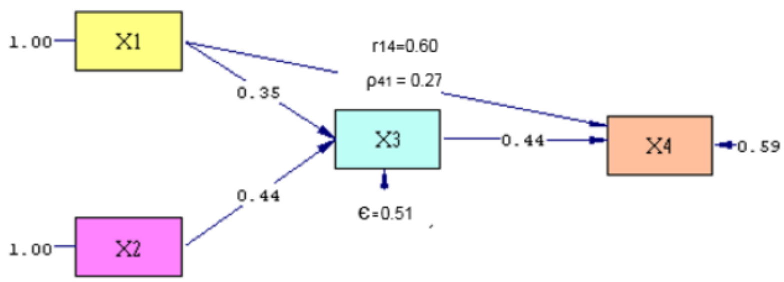

Figure 4. Path coefficient (ρxy), correlation coefficient (r xy), t-statistic, and error (ϵ)

The following is a significant test of path coefficients in Structural Model.

Table 4. Path Analysis

Hypothesis	Variable	Total Effect (ρ)	$t_{statistic}$	t_{table} α= 0.01	t_{table} α =0.05	Significance	Result
H1	X1 on X3	0.35**	3.83	2.63	1.98	$t_{statistic}>t_{table}$	Reject H_0
H2	X1 on X4	0.27*	2.30	2.63	1.98	$t_{statistic}>t_{table}$	Reject H_0
H3	X2 on X3	0.44**	4.83	2.63	1.98	$t_{statistic}>t_{table}$	Reject H_0
H4	X2 on X4	0.09^{ns}	0.80	2.63	1.98	$t_{statistic}<t_{table}$	Accept H_0
H5	X3 on X4	0.44**	4.43	2.63	1.98	$t_{statistic}>t_{table}$	Reject H_0
H6	X1 on X4 through X3	0.44**	4.58	2.63	1.98	$t_{statistic}>t_{table}$	Reject H_0
H7	X2 on X4 through X3	0.20**	3.27	2.63	1.98	$t_{statistic}>t_{table}$	Reject H_0

Source: Author, 2015
** : The path coefficients are very significant at α = 0.01, respectively.
* : The path coefficients significant at α = 0:05.

4. Discussion

Environmental uncertainty has a direct effect on innovation with the coefficient of 0.35. Utilization of online technologies, the gap of resources such as the availability of experts and banking funds, bank interest rates, the level of customer service, and the anticipated actions of competitors will drive the company set up a functional coordination with more flexibility and less rigid bureaucracy in order to become more organized. Environmental uncertainty defines organizational strategies, including differentiating themselves to suit the customer's needs and excessive increasing demand. The dynamics of rapidly changing information technology require organizations to innovate to adapt to the business environment.

Innovation has a significant direct effect on business performance with the coefficient of 0.44. This result proves that the more the organization innovates in transforming ideas, systems, processes, and product and service of the banking business, the more it will maximize business performance both financially and non-financially.

Environmental uncertainty has a direct effect on business performance with the coefficient of 0.27. The optimal business performance will be achieved if the organization is able to effectively respond to the environmental uncertainties and adapted to the dynamic environmental conditions. Environmental uncertainty also has an indirect effect on business performance through innovation with the coefficient of 0.44. Environmental uncertainty will encourage the growth of the diversity of the bank's business innovation, which in turn will have an effect on increasing the diversity of maximum business performance. The pattern of relationships like this may happen by considering the findings of the study that the external environment is synonymous with environmental uncertainty. In the context of the banking industry, there are a variety of factors such as the high utilization of environmental uncertainty in on-line technology that causes the increased risk in the event of damage to the network; the high interest rates that lead to low purchasing power. To anticipate all factors of environmental uncertainty, organizations must innovate so they can survive and create added value for their customers on an ongoing basis, and in turn can increase the maximum business performance.

Market orientation has a significant direct effect on innovation with the coefficient of 0.44. This finding means that the improvement in the organization market orientation will foster innovation in the Bank. The company's commitment to continue learning the market as an effort to discover hidden customer needs, look for underserved markets, and mobilize resources in an organizational context, will encourage the company to focus on innovation and change internally in terms of inter functional, competitor intelligence, and value creation of each individual within the organization in order to obtain a competitive advantage.

Market orientation has no direct effect on business performance. This finding is in line with Slater and Narver (1994) who empirically found no visible direct relationship between market orientation and performance objective. Han et al (1998) also found an indirect relationship between market orientation and performance objective. This indicates that the marketing strategy will not be sufficient without notice and even without being followed by the ability of creativity in the organization. However, market orientation has an indirect effect on business performance through innovation with the coefficient of 0.20.

5. Conclusion

The findings in this research indicate that market orientation is the key to organizational success to perform a variety of organizational innovation and in turn encourage the various results of business performance. If organizations are market-oriented and able to develop innovation, they will improve their business performance success. It is important for organizations to develop innovations in order to enable them to compete in the new market, present significant contribution to the customer, and to perform various transformations in a wide range of ideas, systems, processes, products and services to create market-entry barriers against potential competitors.

If the banks implement a wide variety of market-oriented strategies and support the diversity of innovative organizational measures, they will improve their business performance results, both financially and non-financially. In other words, the improvement in business performance is necessary for responding to the environmental uncertainty, market orientation, and innovation. However, other variables need to be the concern in the advanced research on the performance of the banking business.

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