An Empirical Study of Furniture SMEs on Environment, Competitive Strategy, Manufacturing Strategy And Performance In East Java

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Abstract

The problem faced by the Indonesian furniture industry in general at this time is tight competition as a result of Indonesia's participation in the free market. Furthermore, the global financial crisis has raised the price of products and services more difficult to be reached by the majority of society. While, the problems faced by SMEs Furniture in East Java Province is the absence of a competitive strategy to overcome the low product quality, high production costs, as well as orders delivery time which is often not on time. This paper discusses an empirical study to solve these problems. Based on the analysis of the research model with Partial Least Squares method, it was obtained the following results. First, the dynamics of the environment affects competitive strategy based on differentiation. Two, competitive strategy will affect the choice of manufacturing strategy. Unfortunately, manufacturing strategy does not affect the performance of SMEs. Meanwhile, the dynamics of the environment will have a direct impact on manufacturing strategy. Finally, competing strategies directly affect the performance of SMEs furniture

Keywords: furniture SMEs, competitive, manufacturing, performance, Partial Least Squares.

1. Introduction

The Government of the Republic of Indonesia through the Ministry of Industry has committed to developing a national furniture industry, because the furniture industry sector was set as the one of the 10 leading Indonesian commodity. This is due to Indonesia's furniture export opportunities still to be excellent to generate foreign exchange. Nevertheless, there are many challenges is faced by furniture Small and Medium Enterprises (SMEs). Among them is a strategy to get a wider market to be done, it is not easy for domestic furniture SMEs to be able to compete for the world furniture market. In terms of price, technology, and marketing, national furniture products are still inferior to competing countries such as: Italy, China, Poland, Canada, and Vietnam. When it compared with Asian countries, such as China, Malaysia, Philippines, Thailand and Vietnam, the competitiveness (competitiveness in advantage) Indonesian furniture products is lower in quality, costs, delivery, promotion and relationship (Andadari, 2008).

In terms of the quality of raw materials, product design and labor costs, according to Andadari (2008) Indonesia are still better than the competing countries. So, as to be able to compete in the international furniture market, now is the time to build and develop the furniture SMEs with competitive strategy (competitive strategy) in order to prevail in the international furniture market. Due to the development of national furniture industry will also help the government program to reduce unemployment. Because the national furniture industry was labor-intensive industries that can create jobs around 4-5 million people (www.indonesia - export.com). Meanwhile in East Java Industry furniture industry in 2010 amounted to approximately 5,076 business units and was able to absorb a workforce of around 57.543 people (www.kominfo.jatimprov.go.id).

According to data published by the Office of Communications and Informatics of East Java Province, the furniture export market development in East Java from year to year was decreased significantly. In 2006, the export value of East Java about 1175.2 million U.S. dollars, then in 2007 decreased to 1.141, 5 million U.S. dollars, or 2.87 percent. Subsequently in 2008 decreased again to about 1098.4 million U.S. dollars, or 3.78 percent compared with the previous. In 2009 the value of furniture exports fell further to 967.2 million U.S. dollars, a drop of 11.94 percent. (www.kominfo.jatimprov.go.id). It is necessary for reserchers to contribute for solving these problems. Unfortunately, few researchers have addressed the problem of SMEs furniture competitive strategy in East Java. In the present study we investigate the relationship between environment, competitive strategy, manufacturing strategy and performance of furniture SMEs in East Java. In this context, this paper aims, firstly, to study through the construct and estimation of sveral factors related to furniture SMEs performance.
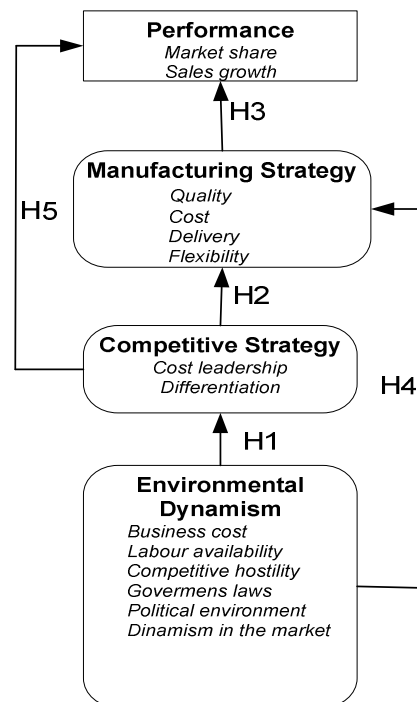
Figure 1. Conceptual model

2.   Materials and Methods

We modified the framework or previous model as reported by Vickery *et a*l. (1997), Badry *et al*. (2000), Ward and Durray (2000), also Gyampah and Acquuah (2008) to investigate the relationship between environment, competitive strategy, manufacturing strategy and performance of furniture SMEs in East Java. To validate the conceptual model (see fig. 1) that we proposed, 44 samples were collected from Pasuruan and Bojonegoro District.

In this study we test the hypothesis that:

1.   The environmental dynamism factor influences competitive strategy choice (H1)
2.   Competitive strategy choice influences manufacturing strategy choice (H2)
3.   Manufacturing strategy choice influences SMEs Performance (H3)
4.   The environmental dynamism factor influences manufacturing strategy choice (H4)
5.   Competitive strategy choice influences SMEs Performance (H5)

In order to confirm these hypotheses we estimated the structural model by using Partial Least Squares (PLS). The reasons to justify the use of PLS in this work are: the number of sample (44) is small, no assumption of normality in the variables required (Chin, 2010). Meanwhile, the items of questionare used in this work was adopted from Ward dan Durray (2000) and Badry *et al*. (2000).

3.   Results and Discussion

3.1.Measurement Model

In summary the results of the evaluation of the model output measurement indicators reflective first order constructs as listed in table 1 below. Based on the results, the Average Variance Extracted (AVE) and communality for latent variable manufacturing strategy also performance are greater than 0.5. It means that the latent variables satisfy convergent validity. It also means that 50% or more variance of the indicators can be explained (Chin, 2010). While the value of Cronbach's Alpha and Composite Reliability for all latent variables (constructs) are greater than 0.7, so that all latent variables (constructs) are reliable. Composite Reliability is used to test the reliability of a construct that is an index that indicates the extent to which the measuring instrument is reliable or trustworthy.

Outer loadings or the convergent validity used to test unidimentionality of each construct. According to Chin (1998), the indicator value greater loading factor equal to 0.5 can be said to be valid. For example: Environmental Concern is a latent variable that is measured from 33 variables (indicators). Based on the test results, it was showed that the value of the loading factor of the 33 indicators are greater than 0.5, namely: BB1, PO1, PO2, PP3, SK2, SK5, and TK 6. This means that 7 (seven) indicators are statistically significant or valid in measuring variables of Environmental concern. Meanwhile, Competitive Strategy is is measured by 10 variables (indicators). The test results in table outer loadings showed that the value of loading factor for the 10 indicators

are greater than 0.5, namely: P2, P3 and P4. This means that the three (3) indicators are statistically significant or valid in measuring variables Competitive Strategy. But, all of the indicators used to measure the variables of Manufacturing Strategy and Performance are valid, because the factor loading values for all indicator variables equal to 1. Furthermore, the invalid indicator construct excluded from the model, then the model in running back, so that a revised path diagram like shown in fig. 2 is obtained by using *SmartPLS 2.0 M3* package.

3.2. Structural Model

Having tested the validity and reliability of all latent variables are the results valid and reliable, and then the latent variables can be followed in the analysis of relationships between constructs. Significance test was used to determine the effect between variables by bootstrapping procedure. Bootstrap resampling is a method in which the entire original sample to perform resampling back. Chin (2010) recommends number of bootstrap samples of 200-1000 is enough to correct the PLS estimate standard errors. In this study of 500 samples for resampling was done. Bootstrap approach represents nonparametric to estimate the precision of the PLS.

Furthermore, based on total effects in table 2, it can be seen that the variables that have a significant effect if the T-Statistics > 1.96 with significance level of 5%. Thus, based on the results of Total Effects, it can be concluded that:

1. Environmental concerns affecting the performance.
2. Environmental concerns influence the choice of competitive strategy.
3. Environmental concerns affect the choice of manufacturing strategy.
4. Competitive strategy affects performance.
5. Competitive strategy does not affect the choice of manufacturing strategy.

However, based on total effects can be seen that the variable environmental concerns influence the performance of flying businesses with T-Statistics = 2.769900.

This study provides results that are almost identical to previous research in Vickery *et al*. (1997), Badry *et al*. (2000), Ward and Durray (2000), also Gyampah and Acquuah (2008). These results demonstrated as follows. Firstly, the dynamics of the environment affects competitive strategy based on differentiation. Secondly, competitive strategy will affect the choice of manufacturing strategy. Meanwhile, the dynamics of the environment will have a direct impact on manufacturing strategy. Finally, competing strategies directly affect the performance of furniture SMEs.

Table 1. Reliability meausurement

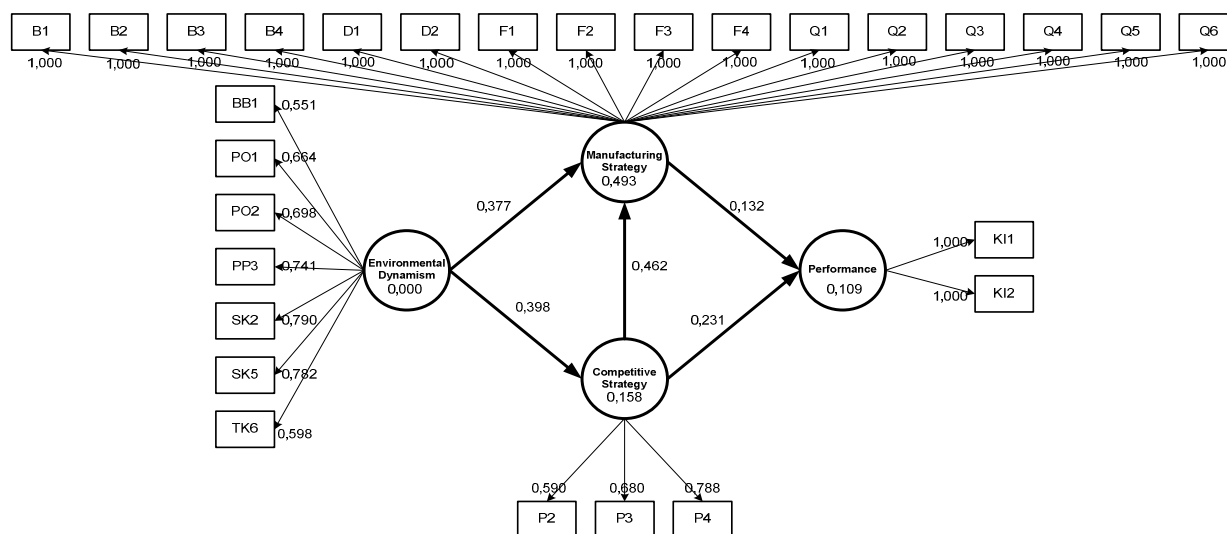|	AVE	Composite Reliability	R Square	Cronbach's Alpha	Communality	Redundancy
Competitive Strategy	0,477316	0,729871	0,158232	0,555681	0,477317	0,056129
Environmental Dynamism	0,464601	0,856242		0,809527	0,464602	
Manufacturing Strategy	1,000000	1,000000	0,493060	1,000000	1,000000	0,351285
Performance	1,000000	1,000000	0,108587	1,000000	1,000000	0,091036

Figure 2. Estimation of the structural equation model.

Table 2. Total effects

		Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	Standard Error (STERR)	T Statistics (IO/STERRI)
1.	Competitive Strategy → Manufacturing Strategy	0.461547	0.458993	0.086570	0.086570	5.331489
2.	Competitive Strategy → Performance	0.292559	0.288477	0.105889	0.105889	2.762879
3.	Environmental Dynamism → Competitive Strategy	0.397783	0.413084	0.085490	0.085490	4.652983
4.	Environmental Dynamism → Manufacturing Strategy	0.560127	0.571873	0.063789	0.063789	8.780974
5.	Environmental Dynamism → Performance	0.166259	0.169564	0.056505	0.056505	2.942377
6.	Manufacturing Strategy → Performance	0.132482	0.132827	0.102162	0.102162	1.296787

Nevertheless, manufacturing strategy did not affect the performance of furniture SMEs. It could be inferred that furniture SMEs has not strong awareness yet to lowering of production cost, satisfying quality / specifications of the products that suit the expectations of consumers, as well as on time delivery schedule is the key to maintaining consumer confidence, which in turn can further increase market share. Thus, SMEs furniture products are lower in quality, cost, delivery, promotion and relationship.

4. Conclussions

In this paper has been discussed a model to enhance the competitiveness of furniture SMEs in East Java to produce a product with low price, quality and competitive services so that improve the performance of furniture SMEs. Based on the analysis of a structural model, we found that there are relationships among environment dynamism, competitive trategy, manufacturing strategy and performance. Unfortunately, competitive strategy did not affect the choice of manufacturing strategy. This findings is promising and should be explored with other Small and Medium Manufacturing Enterprises.

Acknowledgements

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