

**BUILDING COMPETITIVE ADVANTAGE THROUGH MARKETING,  
MANUFACTURING AND ENVIRONMENTAL  
MANAGEMENT STRATEGY:  
A CASE STUDY OF METAL PRODUCT SMEs IN TEGAL**

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**Abstract**

*This research investigates how the marketing strategy, manufacturing strategy and environment management create SMEs competitive advantage that will improve SMEs business performance. It gives both theoretical and managerial implications about steps must be taken by SMEs to improve their business performance through the competitive advantage gained from the marketing strategy, manufacturing strategy, and the ability to manage the environment. This research includes a data set from 121 SMEs.*

*Results show that the manufacturing and environment management strategy positively affects SMEs competitive advantage, and the competitive advantage also positively affects SMEs business performance. Marketing strategy implemented didn't affect the competitive advantage. This research proved that for now, the competitive advantage of metal product SMEs in Tegal lay on their ability to create product in accordance with consumers want. Metal SMEs always maintain their flexibility and product quality with competitive prices. To gain the competitive advantage, SMEs must have the ability to adjust with political and economics transformation such as general election or city major and governor transformation. Because of its flexibility, metal SMEs in Tegal can easily adjust with the transformation of political and economical climate. The last thing that must be noted from this research is that metal SMEs in Tegal didn't implement the marketing strategy well because of the job-order system. The competitive advantage will be more perfect if the company also have superb marketing strategy.*

**Keywords:** *SMEs, marketing strategy, manufacturing strategy, environment management strategy, competitive advantage, and business performance.*

## I. Introduction

The economic crisis that smash Indonesia at the end of 1997 has made Indonesia's economy decline 13,7 percent at the following year. The crisis proves that the survival rate of small company (SMEs) is much bigger than the large one. Peter Ducker (1984) said that SME has become a motor in economic sector in Japan, UK, US, etc. It is time for the government and the people to set an eye to SME, because it will provide adequate job opportunities and create more various products.

From a survey conducted by SWA magazine on 300 successful business people in Indonesia, it can be seen that the SME's has succeed in facing the economic crisis. The result of the survey tells us that 50 SMEs (evaluated by their managerial and financial performance) deserve to receive the award in 2000 (Eva Marta Rahayu dan Farida Nawang Nurini, 2000). From that result, we can conclude that the success factor of SMEs is because they were able to choose the right business strategy to improve their performance.

## II. Research in Metal Product SMEs

### A. Metal Product SMEs

In Central Java, the big three metal product SMEs are located in Klaten, Tegal dan Purbalingga. In Klaten, the SMEs are located in Desa Batur, Kecamatan Ceper. In 1992, metal product industry in Batur was the biggest and the most modern among all metal product centres in Indonesia (Departemen Koperasi dan Pembinaan Usaha Kecil, 1994). Tegal was the second-best metal product centre after Batur, and at that time are facing hard times because the lack of order. Metal product SMEs in Batur join in a "Koperasi", while metal industries in Tegal were unite in Lingkungan Industri Kecil (LIK) under Departemen Perindustrian. Nowadays all metal SMEs in Tegal unite in LIK Takaru, which stands for Talang, Cempaka dan Waru. Previously, Talang, Cempaka and Waru is a separate metal product centre located in Tegal (Disperindag, 2006).

Since 2006, Tegal had become the biggest and the most modern metal product centre in Indonesia (Disperindag, 2006). Tegal already have a *technology centre* (TC) located in LIK Takaru, which costs 7 billion, and it needs more 40 billion to operate optimally.

### B. Research Gap

Skinner (1969) introduced manufacturing strategy as an effort to exploit manufacturing resources as competitive weapon. Swamidass and Newell (1987) defined manufacturing strategy as tools that made the use of manufacturing strength to pursue corporate and business goals. Cox and Blackstone (1998) define manufacturing strategy as a set of decision about formulation and the use of manufacturing resources that supports all strategic function. Korth (2005) also described the importance of manufacturing strategy through continuous innovation. Korth (2005) identified four types of innovation, which are product and service, manufacturing process, material and innovation in business practice. A company must always improve its innovation

capability and activity, so that the company will always grow both in upper and lower line. From various definition described above, we can conclude that manufacturing strategy has a very important role for the company.

Some researcher argues that marketing strategy has better impact in company performance than manufacturing strategy. Taylor (2000) proposed the importance of utilizing emotions for the marketing manager. He described some emotions theory to support the advertising, merchandising and selling strategy. With the good market and emotion understanding, manager can choose the right marketing strategy for consumers with different type of emotion. Albaum and Tse (2001) found that business performance positively related with the marketing competitive advantage. Their research shows that the adaptation of marketing mix component was the key to achieve success.

Marketing strategy has a very important role in helping company to achieve success, because it related with technology and global competition tactics (Knight, 2000). Brooksbank (1991) and Siu (2000) stated that company with good performance is implementing focus market strategy to increase sales volume with market expansion/penetration rather than increasing their product price. Siu (2000) also stated that the innovation concept is very important for company who want to succeed.

The third opinion stated that the competitive advantage of a firm depends on the ability of management to manage the environment. Brown and Karagozoglu (1998) suggest proactive corporate environmental management as company strategy to create competitive advantage, because nowadays consumers are more sensitive with environmental issues. The success of environmental management completely depends on the company policy. Using low pollution technology to create environmental friendly product is an example of business strategy that lower the production cost and also strengthening company's competitive advantage. Dean J.T, Robert L. Brown and Charles E. Bamford (1998) proposed that small business is more quickly to adapt with environmental change rather than the big one. Scherer and Ross (1990) also stated that because of that ability, they could adjust their production capacity with market demand, and change their product price easily. Chavan (2005) stated that the good implementation of environmental management would help SMEs achieving competitive advantage.

There are several opinion among researchers about the most important strategy must be used by the company if they want to gain a competitive advantage. Some says that good marketing strategy will strive business into success (Knight, 2000; Siu, 2000; Taylor, 2000; Albaum dan Tse, 2001), but the others said that manufacturing strategy (Skinner, 1969; Cox dan Blackstone, 1998; Korth, 2005) is more important in helping company in gaining competitive advantage. Another group of researchers said that the ability in managing environment was the most important in creating company's competitive advantage (Brown dan Karagozoglu, 1998; Dean J.T, Robert, L. Brown dan Charles E. Bamford, 1998; Chavan, 2005).

This research attempts to reduce this research gap by exploring the relationships between marketing, manufacturing and environmental management strategy in creating SMEs competitive advantage, and the relationship of SMEs competitive advantage to SMEs business performance. The analysis uses data from 121 metal products SMEs in Tegal, Central Java – Indonesia.

### III. Literature Review and Hypotheses Development

#### A. Research Hypothesis 1: Marketing Strategy and Competitive Advantage

Marketing strategy has a very important role in helping company to achieve success, because it related with technology and global competition tactics (Knight, 2000). Brooksbank (1991) and Siu (2000) stated that company with good performance is implementing focus market strategy to increase sales volume with market expansion/penetration rather than increasing their product price. Siu (2000) also stated that the innovation concept is very important for company who want to succeed.

Siu (2000) also stated that Chinese SMEs has implementing the marketing strategy correctly to win the market competition. They use price cutting strategy and low cost production. Another alternative used by Chinese SMEs is diversification strategy; they provide different products for different market.

Taylor (2000) proposed the importance of utilizing emotions for the marketing manager. He described some emotions theory to support the advertising, merchandising and selling strategy. With the good market and emotion understanding, manager can choose the right marketing strategy for consumers with different type of emotion.

The study of Albaum and Tse (2001) found that business performance has positive relation with company's marketing competitive advantage. They took sample from 183 exporting company in Hong Kong. The study also found that adaptations of marketing mix components are very useful to gain success.

Marketing concept is the main basis in creating SMEs policy, because with good marketing strategy, the company will be able to gain profit (Peterson, 1988). Udelac and Sudarevic (2006) stated that the use of marketing strategy would help the company achieving competitive advantage. This strategy consists of quick response, good product quality, real service and on-time distribution. Nevertheless, Siu and Kirby (1999) stated that SMEs are not using formal marketing strategy, except pricing strategy. The above arguments lead to hypothesis 1:

*H1: The better the application of marketing strategy, the higher the level of competitive advantage*

#### B. Research Hypothesis 2: Manufacturing Strategy and Competitive Advantage

Skinner (1969) is the first person that stated the importance of manufacturing strategy for company. He said that manufacturing strategy related with the efforts to exploit manufacturing resources as competitive weapon. Hayes and Wheelwright (1984) define manufacturing strategy as decision-making consistency in manufacturing that related with business strategy. Hill (2000) stated that manufacturing strategy represent a coordinated approach in order to gain business success. Cox and Blackstone (1998) define manufacturing strategy as a set of decision about the use and formulation of manufacturing resources. To be effective, manufacturing strategy must support all business strategic function.

Since Skinner's study about the importance of manufacturing strategy for factory managers, his thought has become a reference in many manufacturing research. It is also from his thought; that the term "competitive priority in manufacturing" came from (Hayes and Wheelwright, 1984). Even there is still some different opinion among researchers; they agree that competitive priority in manufacturing divided into four components; low cost, quality, delivery and flexibility (Wheelwright, 1984).

Competing through low cost strategy can enhance company's business performance. The lower the production cost, the lower the price of the product (Krajewski and Ritzman, 1999). Brooksbank (1991) stated that manufacturing strategy positively related with cost minimization, so it can minimize the product's price.

Korth (2005) also described the importance of manufacturing strategy through continuous innovation. Korth (2005) identified four types of innovation, which are product and service, manufacturing process, material and innovation in business practice. A company must always improve its innovation capability and activity, so that the company will always grow both in upper and lower line. Company needs continuous innovation to gain better competitiveness, performance and feature. Innovation really affects the frequency of new products introduced by the company, and lead-time when they want to change the design of a product (Hauser, 1988). Hall (1983) describes the importance of flexibility so company can quickly switch their focus from one product to another or from one department to other department to win market competition. The above arguments lead to hypothesis 2:

*H2: The better the application of manufacturing strategy, the higher the level of competitive advantage*

### **C. Research Hypothesis 3: Environmental Management Strategy and Competitive Advantage**

Brown and Karagozoglu (1998) suggest *proactive corporate environmental management* as company strategy to create competitive advantage, because nowadays consumers are more sensitive with environmental issues. The success of environmental management completely depends on the company policy - by using low pollution technology/recycling facilities to create environmental friendly product is an example of business strategy that lower the production cost and also strengthening company's competitive advantage.

Dean J.T, Robert, L. Brown and Charles E. Bamford (1998) proposed that small business is more quickly to adapt with environmental change rather than the big one. These become the competitive basis for small business. Because of the simple organization structure, system and production process, and also the lack of competitors, they can quickly adapt with environmental change (Chen and Hambrick, 1995). Scherer and Ross (1990) also stated that because of that ability, they could adjust their production capacity with market demand, and change their product price easily.

Krajewski and Ritzman (2003) divided environment into six factors, which is: economical, technological, political and social change. Masood A.Badri, Donald Davis and Donna Davis (2000), stated that environmental variables would affect manager in making

competency-based operation strategy. Chavan (2005) stated that the good implementation of environmental management would help SMEs achieving competitive advantage. The above arguments lead to hypothesis 3:

*H3: The better the application of environmental management strategy, the higher the level of competitive advantage*

#### **D. Research Hypothesis 4: Competitive Advantage and Business Performance**

The concept of competitive advantage has received much academic attention and has become well-established in literature (Barney, 1991; Porter, 1985; Coyne, 1986). According to the literature, a firm is rewarded with a competitive advantage when it offers uniqueness and/or value. For example, Aharoni (1993) suggests that competitive advantage can be achieved if a firm is able to be "different". Porter (1985) has identified differentiation as one of the two types of competitive advantage, the other being cost leadership. In his discussion, competitive advantage stems from being either unique in an industry along some dimension that is valued by a significant portion of the target market or by establishing the position of being the low cost producer in an industry. For the small firm, the attainment of a sustainable competitive advantage is more likely to stem from the development of uniqueness than from their ability to secure position of cost leader within an industry.

To respond the increased market competition, manager must learn how to create a sustainable competitive advantage. Two important elements from competitive advantage are perceived customer value and uniqueness (Ulrich, 1991). Perceived customer value will be created if company completely know and understand what consumer's really needs. Uniqueness will be created when business develop their unique capability that can give additional value for the consumers.

Rangone (1999) introduce three basic capabilities of SMEs, which are: innovation capability, production capability and market management capability. Innovation capability is business ability to develop new products and processes, and take out technological and/or management performance. Production capability is the ability to produce and send the product into the customer with competitive priorities (quality, flexibility, lead-time, cost and dependability. Market management capability is business ability to sell and market their products effectively and efficiently.

Strandskov (2006) measures company's competitive advantage through four variables: Firm Specific Advantages, Localization Specific Advantages, Relationship Specific Advantages and Competitive Strengths/Performance. His study found that Firm Specific Advantages and Relationship Specific Advantages have more positive effects on the success of business performance.

Cavanagh and Clifford (1986) found that company focused in creating value for their customers would have better performance than the one that only focused in product pricing. Innovation, wide range of product choice and customization will also positively effects into business performance (Chaganti dan Chaganti, 1983).

Competing through low cost strategy can enhance company's business performance. The lower the production cost, the lower the price of the product (Krajewski and Ritzman, 1999). Marketing strategy related with total maximization of revenue, through customer focus ad environment sensitivity, while manufacturing only focus in cost minimization, so the product can be sold at minimum price (Brooksbank, 1991). The above arguments lead to hypothesis 4:

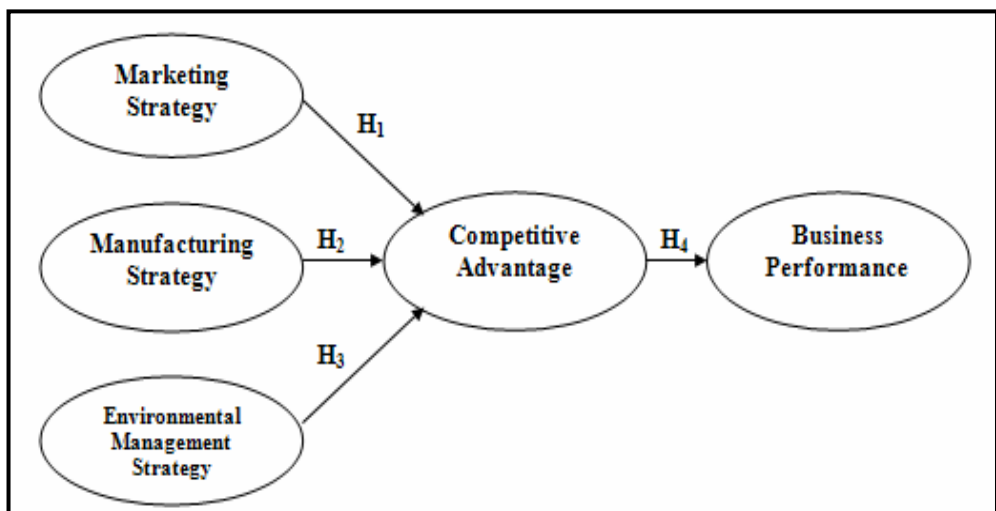
*H4: The higher the level of competitive advantage, the higher the level of business performance*

## IV. Research Approach

### A. Research Framework

From the literature review and hypothesis above, it can be proposed that in order to improve their business performance, SMEs has to have a competitive advantage gained from marketing, manufacturing and environmental management strategy. The relationship between marketing strategy, manufacturing strategy, environmental management strategy, competitive advantage and business performance can be seen in Figure I below:

Figure I  
Research Framework



Source: Knight (2000); Siu (2000); Brooksbank (1991), Ward et al (1997), Krajewski dan Ritzman (1999), Strandkov (2006), Chen dan Hambrick (1995).

## B. Measurement, Variables and Indicators

The data in this research were measured using Likert-like 7 scale measurement. The minimum value represents “strongly disagree” and the maximum represents “strongly agree”. The variables and indicators used in this research can be seen in Table I below:

**Table I**  
**Variables and Indicators**

Variable	Indicator	Reference
Marketing Strategy	Q1 Pricing	Menon, Bharadwaj and Howell (1996)
	Q2 Promotion media	
	Q3 Distribution	
Manufacturing Strategy	Q4 Cost Calculation	Ward et al. (1997)
	Q5 Product component	
	Q6 Flexibility	
Environmental Management Strategy	Q7 Responsive to political climate change	Krajewski and Ritzman (2003); Masood A.Badri, Donald Davis dan Donna Davis (2000).
	Q8 Responsive with social-economic change	
	Q9 Waste management	
Competitive Advantage	Q10 Product development.	Andrea Rangone (1999) and Aaker (1989)
	Q11 Easy to replicate	
	Q12 Reputation	
Business Performance	Q13 Consumer growth	Venkatraman and Ramanujan (1986); Menon et al. (1996) and Slater and Narver (1994)
	Q14 Sales growth.	
	Q15 Profit growth.	

## C. Data

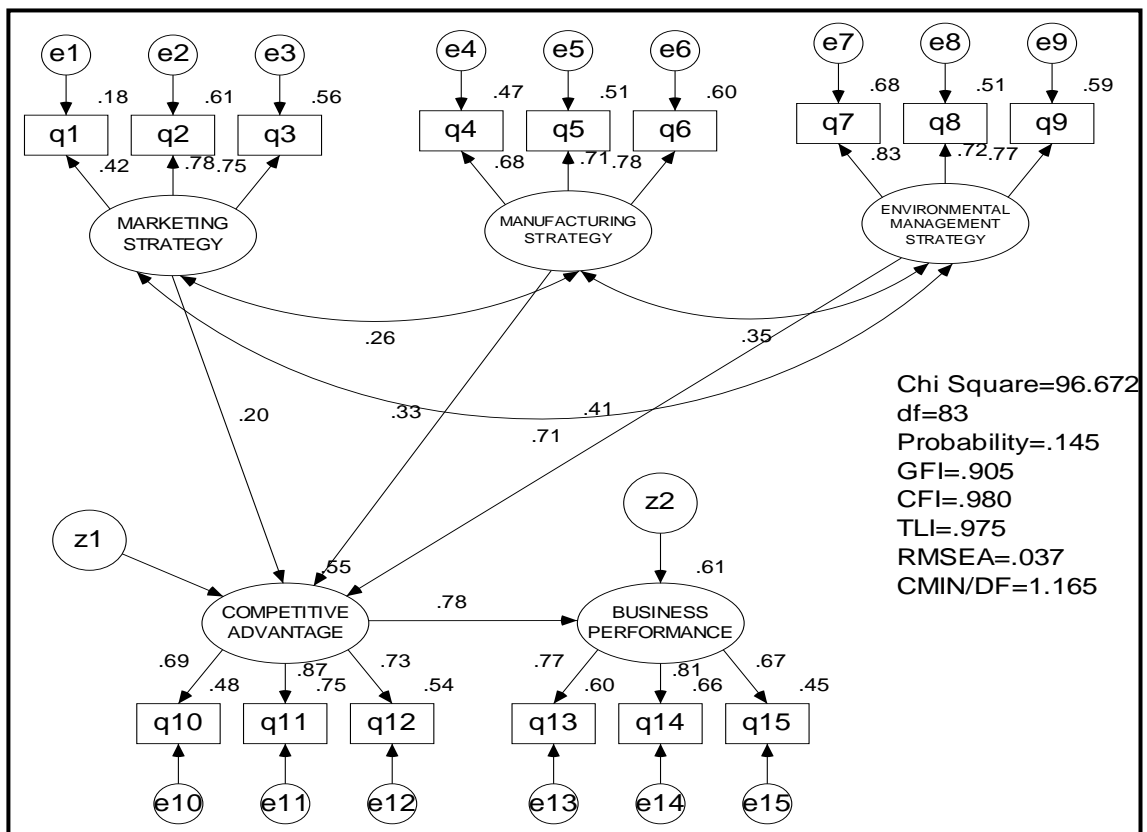
The research objects are all metal products SMEs owner in Tegal, with the total population is 140 metal products SMEs owner. The data was collected from May until August 2007. Since this research use census method, the sample is 140 metal products SMEs owner in Tegal. There are only 121 respondents, which can be used in this research, because a total of 19 respondents refuse to give response. It means only 86.4 % of total data used in this research.



#### D. Determining the Overall Fit of the Model

One of the questions that have yet to be answered concerning CFA and structural equation modeling in general is which fit statistic(s) to use. Bentley (1994) notes that, "Although structural equation modeling is by now quite a mature field of study, it is surprising that one of the basic elements of the modeling process, and one of its major 'selling points' - the ability to evaluate hypothesized process models by statistical means - remains an immature art form rather than a science." Bentler (1990) and Thompson (1998) also note the problem with interpreting just one fit statistic and caution the researcher to consult multiple fit statistics in order to consider different aspects of fit. This model will consult the chi-square statistic, the Bentley (1990) comparative fit index, or CFI; the Joreskog and Sorbom (1986) Goodness-of-fit Index, or GFI, and the root mean square residual, or RMSEA. The results for each of these test statistics can be seen in Figure II below:

Figure II  
 Result of Analysis using AMOS 16 Software



Source: Data Analyzed by AMOS 16 software, 2007

**Table II**  
**GOODNESS OF FIT INDEX**

Goodness of Fit Indeks	Cutt-off value	Result from Model	Evaluation
Chi-Square	< 105,267 (5%,83)	96,672	GOOD
Probability	≥ 0,05	0,145	GOOD
RMSEA	≤ 0,08	0,037	GOOD
GFI	≥ 0,90	0,905	GOOD
TLI	≥ 0,95	0,975	GOOD
CFI	≥ 0,95	0,980	GOOD
CMIN/DF	≤ 2,00	1,165	GOOD

Table II shows that all Goodness of Fit criterions was considered as “fit” or “good” after compared with the cut-off value of each criterion. Therefore, these results show that the model has fulfilled all Structural Equation Model goodness of fit assumption.

#### IV. Hypotheses Testing

The result of the analysis tells those only 3 out of 4 hypotheses are accepted. The manufacturing and environment management strategy positively affects SMEs competitive advantage, and the competitive advantage also positively affects SMEs business performance, while marketing strategy didn’t affect the competitive advantage as seen in table above. The hypothesis will be accepted if CR score  $\geq \pm 1.96$  and the probability  $\leq 0,05$  (Hair et al., 1995). The analysis of each hypothesis can be seen in Table III below:

**Table III**  
**Hypotheses Testing**

Hypotheses	Std Estimate	S.E.	C.R.	P
Competitive_Advantage <--- Manufacturing_Strategy	.326	.099	3.063	.002
Competitive_Advantage <--- Environmental_Management	.407	.117	2.576	.010
Competitive_Advantage <--- MARKETING_STRATEGY	.198	.250	1.209	.227
Business_Performance <--- Competitive_Advantage	.778	.112	5.622	***

Note: \*\*\* Shows that the probability is less than 0.001.

From Table III above, only one hypothesis didn't suit the criterion mentioned above. The regression result for marketing strategy to competitive advantage has CR score of 1,209 (less than 1,96) and 0,227 probability (more than 0,05), so it means that this hypothesis cannot be accepted. Another three hypothesis have CR score more than 1,96 and probability less than 0,05; therefore these hypotheses were all accepted.

### A. Data Test: Outlier Univariate

Data from respondent responses of the questionnaires must not have univariate outlier. If the Z scores of the data  $\geq 3$ , it indicates univariate outlier (Hair et al., 1995). Table 4 below show that none of 15 indicators have minimum or maximum score more than  $\pm 3$ .

**Table IV**  
**Test of Univariate Outliers**  
**Descriptive statistics**

	N	Minimum	Maximum	Mean	Std. Dev.
Zscore(Q1)	121	-1.93601	1.90427	.00000	1.00000
Zscore(Q2)	121	-1.70136	1.55599	.00000	1.00000
Zscore(Q3)	121	-1.94870	1.44889	.00000	1.00000
Zscore(Q4)	121	-1.69797	1.47262	.00000	1.00000
Zscore(Q5)	121	-2.19824	1.44542	.00000	1.00000
Zscore(Q6)	121	-2.01898	1.52155	.00000	1.00000
Zscore(Q7)	121	-1.38770	1.67638	.00000	1.00000
Zscore(Q8)	121	-1.77098	1.59833	.00000	1.00000
Zscore(Q9)	121	-1.69120	1.64162	.00000	1.00000
Zscore(Q10)	121	-1.88570	1.39260	.00000	1.00000
Zscore(Q11)	121	-1.92565	1.44145	.00000	1.00000
Zscore(Q12)	121	-1.95799	1.69813	.00000	1.00000
Zscore(Q13)	121	-2.33759	1.52646	.00000	1.00000
Zscore(Q14)	121	-1.81576	1.37998	.00000	1.00000
Zscore(Q15)	121	-1.93615	1.37515	.00000	1.00000
Valid N (listwise)	121				

## B. Distribution of Normality

The normality criteria can be shown by CR value both in skewness and kurtosis. The cut off value for both CR value in skewness and kurtosis are  $\geq \pm 2.58$ . It means if CR values are more than 2.58 then the data are not normally distributed. The normality Table V can be seen below:

**Table V**  
**Evaluation of Normality**

Variable	Min	Max	Skew	c.r.	Kurtosis	c.r.
Q3	2.000	7.000	-.149	<b>-.668</b>	-.999	<b>-2.244</b>
Q9	2.000	7.000	.151	<b>.679</b>	-1.016	<b>-2.281</b>
Q8	2.000	7.000	-.005	<b>-.022</b>	-.802	<b>-1.801</b>
Q7	2.000	7.000	.193	<b>.867</b>	-1.076	<b>-2.417</b>
Q12	2.000	7.000	.085	<b>.383</b>	-1.017	<b>-2.284</b>
Q15	3.000	7.000	-.217	<b>-.974</b>	-.882	<b>-1.980</b>
Q14	3.000	7.000	-.193	<b>-.868</b>	-.926	<b>-2.079</b>
Q13	2.000	7.000	.023	<b>.105</b>	-.927	<b>-2.081</b>
Q10	2.000	7.000	-.073	<b>-.328</b>	-1.062	<b>-2.385</b>
Q11	2.000	7.000	-.018	<b>-.082</b>	-1.044	<b>-2.345</b>
Q6	2.000	7.000	-.092	<b>-.411</b>	-.820	<b>-1.841</b>
Q5	2.000	7.000	-.146	<b>-.657</b>	-1.036	<b>-2.327</b>
Q4	2.000	7.000	-.086	<b>-.387</b>	-.963	<b>-2.161</b>
Q2	2.000	7.000	-.052	<b>-.233</b>	-.955	<b>-2.143</b>
Q1	1.000	7.000	.090	<b>.406</b>	-.767	<b>-1.721</b>
Multivariate					5.946	<b>1.448</b>

The table shows that none of 15 indicators have CR value more than 2,58 both on skewness and kurtosis. It means that none of 15 indicators have the normality problems.

## C. Reliability Analysis

Reliability is a consistency measurement of a factor showing how its indicators indicate the factor as latent variable. The cut off value for reliability is 0.6 (Hair et al., 1995). Formula of construct reliability is:

$$f \text{ Construct Reliability} = \frac{(\sum \text{Standard Loading})^2}{(\sum \text{Standard Loading})^2 + \sum \epsilon_j} \quad (1)$$

Table below shows that all construct reliability value is bigger than 0,6. It means that all indicators in this research explain its latent variable generally.

**Table VI**  
**Reliability Analysis**

Variable	STD. LOADING	ERROR	CONSTRUCT RELIABILITY
MARKETING STRATEGY			0.70
Q1	0.42	0.82	
Q2	0.75	0.44	
Q3	0.78	0.39	
MANUFACTURING STRATEGY			0.77
Q4	0.68	0.54	
Q5	0.71	0.50	
Q6	0.78	0.39	
ENVIRONMENTAL MANAGEMENT STRATEGY			0.82
Q7	0.83	0.31	
Q8	0.72	0.48	
Q9	0.77	0.41	
COMPETITIVE ADVANTAGE			0.81
Q10	0.69	0.52	
Q11	0.87	0.24	
Q12	0.73	0.47	
BUSINESS PERFORMANCE			0.80
Q13	0.77	0.41	
Q14	0.81	0.34	
Q15	0.67	0.55	
	2.25	1.30	

## V. Discussion and Implications

From the data analysis and field survey, this research proved that for now, the competitive advantage of metal product SMEs in Tegal lay on their ability to create product precisely like what the consumers want. Most of them became imitator and interpreter. Metal SMEs always maintain their flexibility and product quality with competitive price. To gain the competitive advantage, SMEs must have the ability to adjust with political and economic transformation such as general election or city major and governor transformation. Because of its flexibility, metal SMEs in Tegal can easily adjust with the transformation of political and economical climate. The last thing that must be

noted from this research is that metal SMEs in Tegal didn't implement the marketing strategy well because of the job-order system. The competitive advantage will be more perfect if the SMEs also have superb marketing strategy.

This research acknowledges a limitation in that the result of this research found that the loading factor for indicators q1 in marketing strategy variable has a very low loading factor score (0.42), and it maybe because of indicators selection.

For future research, it needs another research in different business type, and the marketing strategy's indicator need to be adjusting with SMEs condition in Indonesia. Total samples need to be enhanced (minimum 300 samples).

Because the decision making in SMEs really depend to its owner/manager, future research also should add entrepreneurship orientation variable. This is similar with Kwaku Atuahene-Gima and Anthony Ko (2001) opinion, which found the close relationship of entrepreneurship orientation into marketing orientation and new product innovation.

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