CUSTOMER RELATIONSHIP MANAGEMENT (CRM) AS A COMPETITIVENESS FACTOR: SMEs MANUFACTURING INDUSTRY OF GUADALAJARA, MEXICO.

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ABSTRACT

This study analyzes the customer relationship management (CRM) and the effect on Competitiveness in the SME's of Guadalajara. The data collection was a questionnaire applied by 410 different managers in Guadalajara, and the processing of data was using EQS 6.1, a statistic program that applies structural equations to find the correlation in variables.

Keywords: *Customer Relationship Management, Competitiveness, Manufacturing SMEs*

1. INTRODUCTION

Constant changes from consumer needs, new technologies development, and international trades open doors has significantly increased access to information and has produced new markets. This has increased international competitiveness; different companies have as an only option in order to deal with industrial competition, to develop innovative products and processes. In those days the most competitive companies are those with greater capacity for innovation. (Sancho, 2007).

One of the main key points for companies in order to innovate are the customers since the customers are the sole essence of the companies, there has been much focus on the consumer demands, every company is proud to say they give their customers what they ask (Ulwick, 2002). Industries must focus on CRM where companies' increase the importance of market-oriented relations development in order to achieve profitability and obtaining competitive advantage (Narver & Slater 1990). The key in order to achieve this, is related to the company's ability to detect and respond to the customer needs and preferences all the time. (Cabanelas, Cabanelas & Lorenzo, 2007).

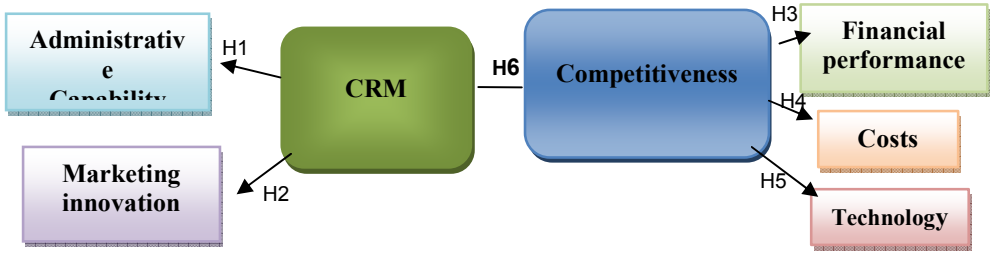
2. LITERATURE REVIEW

One new way to keep customers satisfied is by having a close relationship with them, and trying to understand their needs and preferences in order to improve and provide a better service. In order to achieve this, we have developed the term CRM; which is defined by some authors from different perspectives. Some of them see it as a business strategy that should adopt the company (Verhoef, 2003), (Payne & Frow, 2004), (Gartner, 2004), (Parvatiyar and Sheth, 2001) while others see it only as a software that helps your store customer data (Zikmund, McLeod & Faye, 2004) but the most interesting definition about this term is given by (Greenberg, 2004), (Bull, 2003) (Bose, 2003). (Chen & Popovich, 2003), (Finnegan and Currie, 2010) which talks about this term as an integral company staff process ,that by working together with technology forms an integral process within the company gets a better interaction with customers and their changing needs.

On the other hand we can say that competitiveness has no standardized definition but most of this eras authors agree that competitiveness is to be the best in the market; manufacturing or country wise. With strong competitiveness manufacturers get more investments and have more productivity also lower costs and offers better products. (Padilla & Ramos, 2006; IMCO, 2011; Romo & Abdel, 2005; Haguenauer, 1989).

This model presents the theoretical construction used for the research of manufacturing SMEs in ZMG, showing the factors that were measured in order to study the relationship that keep each other. See figure 1.

Figure 1. Theoretical model from the relation between CRM and competitiveness



Source: author's elaboration.

3. METHOD

This study made a research of 410 different SME´s manufacturing industry companies in Guadalajara, Mexico, during January and May 2013.

Also, there are seven hypotheses that will contribute to this research:
H1: A Higher level of Administrative Capacity, higher CRM.
H2: A Higher level of Marketing Innovation, higher CRM.
H3: A Higher level of financial performance, higher competitiveness.
H4: A Higher level of cost reduction, higher competitiveness.
H5: A Higher level of technology use, higher competitiveness
H6: A Higher level of CRM, higher competitiveness.

In order to measure competitiveness level, it is considered three factors proposed by Buckley, Pass & Prescott, (1988): 1) financial performance, 2) costs reduction, and 3) technology use, all measured by 6 items, each; CRM Furthermore, considered two factors, the authors (Karakostas, Kardaras and Papathanassiou, 2005), (Boulding, Staelin, Ehret, and Johnston, 2005), (Winer, 2001), (Lafuente & Bassa, 2011), (MSI, 2006): 1) Management capacity 2) Marketing Innovation, with 5 and 4 items. All above elements were measured with Likert scale of 5 level positions, as 1 = strongly disagree 5 = strongly agree as limits.

Also in order to assess scales reliability and validity on measuring the level CRM and business competitiveness, a Confirmatory Factorial analysis (CFA) was used with the method of maximum likelihood and EQS 6.1 software (Bentler, 2005;) Brown, 2006; (Byrne, 2006). Statistical adjustments rates that were considered the NFI, NNFI, IFC and RMSEA (Bentler & Bonnet, 1980;) Byrne, 1989; Bentler, 1990; Hair, Tatham & Black, 1995; Chau, 1997; (Heck, 1998).

4. ANALYSIS AND DISCUSSION

The results from the Confirmatory Factorial Analysis (CFA) are shown in table 1 and shows that the measurement model provides a good data fit. As a convergent validity CFA evidence, indicates that all items from the related factors are significant ($p < 0.01$), (Bagozzi y Yi, 1988), which provides evidence of reliability and justifies the internal reliability scale of the business competitiveness (Nunally & Bernstein 1994); (Hair et al., 1995) show in table 1.

TABLE 1. INTERNAL CONSISTENCY AND CONVERGENT VALIDITY FROM THE THEORETICAL MODEL

Variable	Indicator	Factor Loading	Robust t-value	Cronbach´s Alpha	CRI	VEI
Administrative Capacity	CRM1	0.780***	1.000*	0.817	0.822	0.607
	CRM3	0.837***	15.641			
	CRM4	0.715***	11.962			
Marketing Innovation	CRI2	0.619***	6.171	0.708	0.703	0.503
	CRI3	0.670***	6.072			
	CRI4	0.685***	6.562			
Financial Performance	FP1	0.753***	1.000*	0.833	0.833	0.505
	FP2	0.772***	13.859			
	FP3	0.715***	10.413			
	FP4	0.738***	11.672			
Costs Reduction	PC2	0.573***	9.820	0.760	0.762	0.500
	PC3	0.776***	16.971			
	PC4	0.741***	16.218			
	PC5	0.566***	10.634			
Technologhy Use	TE1	0.673***	1.000*	0.848	0.849	0.508
	TE2	0.761***	14.920			
	TE3	0.721***	14.515			
	TE4	0.724***	14.305			
	TE5	0.618***	11.182			
	TE6	0.670***	12.673			

About the evidence for the discriminant validity, business competitiveness scale measurement level was through two ways which you can see in more detail in Table 2. First, the range of 95% of reliability, none of the individual elements of the correlation factors matrix contains the value 1.0 (Anderson & Gerbing, 1988). Second, the variance extracted between each pair of factors is higher than its corresponding VEI (Fornell & Larcker, 1981). Therefore, based on these criteria we can conclude that the different measurements made on the scale show enough evidence of reliability and convergent and discriminant validity.

TABLE 2. DISCRIMINANT VALIDITY FROM THE THEORETICAL MODEL MEASUREMENT

Variables	CRM	Competitiveness
CRM	**0.555***	0.310
Competitiveness	0.192 - 0.372	**0.520***

*These values show the estimation between the correlation factors with a confidence interval of 95%.

The hypotheses were tested in the theoretical model of innovation and business competitiveness, using the Structural Equations Model (SEM) software EQS 6.1 (Bentler, 2005;) Byrne, 2006; (Brown, 2006).
The discriminant validity of the theoretical model was analyzed through the performance of the chi-square test, in which the theoretical model was compared with the model measurement, and not finding significant differences (Anderson & Gerbing, 1988;) (Hatcher, 1994). The results are presented in table 3.

TABLE 3. RESULTS FROM THE THEORETICAL MODEL ABOUT BUSINESS COMPETITIVENESS

Hypothesis	Structural Relationship	Standardized Coefficient	Robust t-value
H1: Higher Administrative Capacity, higher CRM	Administrative Capacity ⟶ CRM	0.478***	13.802
H2: Higher Marketing Innovation, higher CRM.	Marketing Innovation ⟶ CRM	0.462***	6.268
H3: Higher Financial Performance, higher Competitiveness	Financial performance ⟶ Competitiveness	0209***	11.981
H4: Higher Cost Reduction, higher Competitiveness	Cost Reduction ⟶ Competitiveness	0.169***	13.411
H5: Higher Technology Use, higher Competitiveness	Technology Use ⟶ Competitiveness	0.223***	13.519
H6: Higher CRM, higher level of Competitiveness	CRM ⟶ Competitiveness	0.470***	10.035
$S\text{-}BX^2$ (df = 503) =1235.7893 ($p < 0.0000$); NFI = .862 ; NNFI = .845 CFI = .861 ; RMSEA = .060			

*** = $p < 0.001$

The table 3 shows the results obtained from the Structural Equations Model, regarding the **H1** the results obtained, $\beta = 0.478$, $p < 0.001$, indicates that administrative capacity has significant effects with the CRM in manufacturing firms. Also for hypothesis **H2**, the results obtained, $\beta = 0.462$, $p < 0.001$, suggest that marketing innovation have significant effects in the CRM too. And hypothesis **H3** the results obtained, $\beta = 0.209$, $p < 0.001$, suggest that financial performance also has significant effects in manufacturing companies. About hypothesis **H4** the results obtained, $\beta = 0.169$, $p < 0.001$, indicate that the cost reduction has significant effects in competitiveness level. In hypothesis **H5** the results obtained, $\beta = 0.223$, $p < 0.001$,), suggest that technology use also have significant effects on business competitiveness. Finally, the results obtained in the hypothesis **H7**, $\beta = 0.470$, $p < 0.001$, presented that the CRM has significant effects on business competitiveness too.

5. LIMITATIONS

Like all researches have its limitations this one is no the exception, as when performing such work must define your universe, leaving behind other possible key factors for research, in this case only were taken small and medium manufacturing enterprises from Guadalajara, excluding micro and large firms, and other municipalities were excluded from Jalisco too. This increase to new researching which can include all businesses of all sizes in order to apply the same concepts to companies missing or different economic companies sectors to take a broader view of the concepts outlined above.

6. CONCLUSIONS

In conclusion we can say that SMEs in the manufacturing sector of Guadalajara, a good correlation was found between the CRM as an independent variable versus competitiveness as dependent one, the same goes for the other factors mentioned in the theoretical model that comprise each of the variables. SMEs are choosing the use of the information provided by the CRM, in order to innovate the market and within the company, creating a new organizational environment where all these are involved of information for each other, creating value for the company

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