Customer relationship management (CRM) as a competitiveness factor: SMEs manufacturing industry of Guadalajara, Mexico

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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.
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

<table>
<thead>
<tr>
<th>Variable</th>
<th>Indicator</th>
<th>Factor Loading</th>
<th>Robust t-value</th>
<th>Cronbach’s Alpha</th>
<th>CRI</th>
<th>VEI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrative Capacity</td>
<td>CRM1</td>
<td>0.780***</td>
<td>1.000*</td>
<td>0.817</td>
<td>0.822</td>
<td>0.607</td>
</tr>
<tr>
<td></td>
<td>CRM3</td>
<td>0.837***</td>
<td>15.641</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CRM4</td>
<td>0.715***</td>
<td>11.962</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marketing Innovation</td>
<td>CRI2</td>
<td>0.619***</td>
<td>6.171</td>
<td>0.708</td>
<td>0.703</td>
<td>0.503</td>
</tr>
<tr>
<td></td>
<td>CRI3</td>
<td>0.670***</td>
<td>6.072</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CRI4</td>
<td>0.685***</td>
<td>6.562</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial Performance</td>
<td>FP1</td>
<td>0.753***</td>
<td>1.000*</td>
<td>0.833</td>
<td>0.833</td>
<td>0.505</td>
</tr>
<tr>
<td></td>
<td>FP2</td>
<td>0.772***</td>
<td>13.859</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>FP3</td>
<td>0.715***</td>
<td>10.413</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>FP4</td>
<td>0.738***</td>
<td>11.672</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Costs Reduction</td>
<td>PC2</td>
<td>0.573***</td>
<td>9.820</td>
<td>0.760</td>
<td>0.762</td>
<td>0.500</td>
</tr>
<tr>
<td></td>
<td>PC3</td>
<td>0.776***</td>
<td>16.971</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PC4</td>
<td>0.741***</td>
<td>16.218</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PC5</td>
<td>0.566***</td>
<td>10.634</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technology Use</td>
<td>TE1</td>
<td>0.673***</td>
<td>1.000*</td>
<td>0.848</td>
<td>0.849</td>
<td>0.508</td>
</tr>
<tr>
<td></td>
<td>TE2</td>
<td>0.761***</td>
<td>14.920</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TE3</td>
<td>0.721***</td>
<td>14.515</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TE4</td>
<td>0.724***</td>
<td>14.305</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TE5</td>
<td>0.618***</td>
<td>11.182</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TE6</td>
<td>0.670***</td>
<td>12.673</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Variables</th>
<th>CRM</th>
<th>Competitiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRM</td>
<td>0.555*</td>
<td>0.310</td>
</tr>
<tr>
<td>Competitiveness</td>
<td>0.192</td>
<td>0.372</td>
</tr>
</tbody>
</table>

*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

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Structural Relationship</th>
<th>Standardized Coefficient</th>
<th>Robust t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1: Higher Administrative Capacity, higher CRM</td>
<td>Administrative Capacity → CRM</td>
<td>0.478***</td>
<td>13.802</td>
</tr>
<tr>
<td>H2: Higher Marketing Innovation, higher CRM</td>
<td>Marketing Innovation → CRM</td>
<td>0.462***</td>
<td>6.268</td>
</tr>
<tr>
<td>H3: Higher Financial Performance, higher Competitiveness</td>
<td>Financial performance → Competitiveness</td>
<td>0.209***</td>
<td>11.981</td>
</tr>
<tr>
<td>H4: Higher Cost Reduction, higher Competitiveness</td>
<td>Cost Reduction → Competitiveness</td>
<td>0.169***</td>
<td>13.411</td>
</tr>
<tr>
<td>H5: Higher Technology Use, higher Competitiveness</td>
<td>Technology Use → Competitiveness</td>
<td>0.223***</td>
<td>13.519</td>
</tr>
<tr>
<td>H6: Higher CRM, higher level of Competitiveness</td>
<td>CRM → Competitiveness</td>
<td>0.470***</td>
<td>10.035</td>
</tr>
</tbody>
</table>

S-BX² (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, β = 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, β = 0.462, p < 0.001, suggest that marketing innovation have significant effects in the CRM too. And hypothesis H3 the results obtained, β = 0.209, p < 0.001, suggest that financial performance also has significant effects in manufacturing companies. About hypothesis H4 the results obtained, β = 0.169, p < 0.001, indicate that the cost reduction has significant effects in competitiveness level. In hypothesis H5 the results obtained, β = 0.223, p < 0.001, suggest that technology use also have significant effects on business competitiveness. Finally, the results obtained in the hypothesis H7, β = 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 enterprices 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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