

Connections between Customer Relationship Management and Market Orientation

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Abstract: *The main goal of this paper is to analyse the relationship between two key managerial conceptions: customer relationship management (CRM) and market orientation (MO). It was decided to conduct a more thorough research on the basis of previous research in these fields, as MO and CRM should be strong concepts that help companies achieve success.*

This research was conducted on a sample of 43 completed questionnaires provided by firms from the field of aeronautics in the Czech Republic and partly in the Slovak Republic. The aerospace industry is a high-tech industry providing high added value. There is a high concentration of research and production capacity in this branch and the importance of the aeronautical industry is continuing to grow. The results of the present research show the level of interdependence between MO and CRM and major deficiencies in their practical application. The influence of MO and CRM on corporate performance was also confirmed.

Key words: Customer Relationship Management · CRM · Market Orientation · Aeronautics

JEL Classification: M31

1 Introduction

Many works have proved the importance of market orientation (hereafter referred to as MO) and customer relationship management (hereafter referred to as CRM) to the long-term prosperity of firms, but little attention has been paid to the relationships between them. Our intention has been to perform a profound analysis of these relationships. The purpose of this paper is to identify the interdependence between CRM and MO, to determine the factors supporting or hindering the application of MO and CRM, to analyze the influence of CRM and MO on corporate performance, and to find out how respondents assess the level of MO and CRM within their own companies.

Customer relationship management usually means the organization of active relationships with customers in order to create a situation of “two winners” on a long-term basis. To achieve this, we have to consider the “what you give is what you get” strategy, to follow the familiar saying “our customer is our master!”, and to behave ethically. We believe that when we adopt such values, we should also apply these principles in relationships with employees, suppliers and all the other interested groups.

The information system has already been understood to be merely support for CRM. The most important thing for CRM are values. Not even the best CRM technology or efficient business practices will lead to the desired effect if the employees of the company, from top management to regular employees, do not practice the correct values. We need to respect a value system in order to meet new challenges. This is known as Value Customer Relationship Management (v-CRM). The values suitable for a successful CRM are: freedom, charity, confidence, service to others, humility, loyalty, openness, joy, peace, truth, respect and honesty (Wessling, 2002).

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One of the simplest definitions of MO is that it represents superior skills in understanding and satisfying customers (Day 1994). On the other hand, many authors point out that MO is not limited to focusing on customers and their anticipated needs and desires (Slater and Narver, 1998; Kohli and Jaworski, 1990; Narver and Slater, 1990). MO needs to have balanced creativity and should demonstrate an understanding of the unique abilities and goals of the given organization (Slater and Narver, 1999).

In today's world, customer orientation is regarded as essential to success, but we can still see that the theory differs from the practice in many cases, and that companies do not really consider the customer a priority. In our previous research we discovered that nearly 20 % of a sample of highly market-oriented companies did not have a customer orientation. 65 % of companies from a sample of less market-oriented companies did not have a customer orientation. We consider this alarming, and many companies have considerable room for improvement. The first step leading towards loyal satisfied customers may be to become more customer-oriented. Something else is, however, also needed. This is closely related to CRM and MO. With their application, companies can find satisfied employees and partners and achieve higher performance.

In the following part of this paper we highlight the conceptual similarities between MO and CRM. The remaining parts of the paper then demonstrate these relationships in practice of companies. The limitation of this research should be the relatively small sample size, but we strongly believe that this research is valid, because the population of companies in the examined field is small and all the most significant companies are represented in the sample.

2 Literary survey

There are many approaches to the definition of MO in the current literature. The particular conceptions differ in the specification of the fundamentals of MO. Two basic approaches exist in this regard. The first approach defines MO as a corporate culture, while the second approach associates it with a manner of behaviour.

The first approach is represented by Narver and Slater (1990, p. 21-22): "Market orientation contains three elements of behaviour – customer orientation, orientation towards the competition and interfunctional coordination (and two decision criteria – long-term orientation and profitability)". Market orientation is understood as a culture concentrating on profit generation and the creation of value for customers, and includes an orientation towards other stakeholders (Narver and Slater, 1990).

The second approach describes MO as a type of behaviour by a company. In connection with MO the authors talk about benefits for customers resulting from "market oriented" behavior, the essence of which they see in the collection of information relating to current and future needs performed by all the departments of the organization, its dissemination within the organization, and the response of individual departments to this information (Kohli and Jaworski, 1990). CRM pursues the consistent development of long-term relationships with the customer in order to create a situation of two winners. It deals basically with the exchange of emotions and information, and acts with the help of various strategies when generating values in processes (Storbacka and Lehtinen, 2002). Roberts, Liu and Hazard (2005) confirmed that the definition of CRM may focus on the customer, but in practice its positive values must be reflected in relations with staff, suppliers and all other interested groups if the philosophy of CRM is to be a success – the same is also true of MO.

CRM and MO have been found to have the following features in common (Frejková, 2009):

- Development of systematic interest in these concepts in the late 1980s.
- MO and CRM have a *long-term focus*; the aim is not just short-term results.
- MO has to be closely connected with *corporate culture* (business culture), the main priority of which is to create higher value for customers (Narver and Slater, 1990). The same is also true for CRM.

- Both MO and CRM are based on the *customer's perception of value*. CRM places the focus on the particular loyalty of the company towards its customers, which we also find in the practical usage of MO.
- It is not enough merely to develop and maintain the relationship with the customer – *care also needs to be devoted to other stakeholders*.
- *Decentralization* of powers and responsibility is necessary. It is recommended that people closer to customers make decisions, and this is certainly true of CRM as well as MO. Jaworski and Kohli (1993) identified a negative relation between centralization and market orientation.
- According to Jaworski and Kohli (1993), a certain level of *risk tolerance* on the part of senior managers and a willingness to accept occasional failures as a normal part of trading is useful for MO. This recommendation also applies to CRM.
- MO and CRM are perceived as a *motivating factor* with a positive effect on employees. When appropriately applied, employees are able to identify more closely with corporate goals and culture. Kohli and Jaworski (1993) state that a greater degree of MO leads to a greater “spirit”, work satisfaction and the bonding of an organization and its employees (Oudan, 2007).
- Both concepts include *ethical and moral aspects* (e.g. Kuntze, 2008; Weessling, 2003).
- Both concepts take advantage of the *support function of technologies* designed for the shared and uniform interpretation of information and the dissemination of this information throughout the company.
- Although the literature on CRM is less concerned with monitoring competition as compared to the literature on MO, the intended result of CRM are competitive advantages, just like MO, so it is important to develop information about the competition in CRM. While the principal values of MO must remain unchanged (irrespective of the conditions facing the company), the actual tools used by a market-oriented company to create information and respond to it are subject to permanent dynamic development. Business culture may only be a source of competitive advantage when it generates a value, is unique, and not easy to imitate (Slater, 2001). *Continuous learning, observing the surroundings, monitoring the competition and a focus on processes* have to be applied in both concepts (e.g. Deshpandé (ed.), 1999; Weessling, 2003).
- *Interrelations between market research, market orientation and CRM* exist. Javalgi, Martin and Young (2006) state that market research is the functional link between marketing management and the main customer base. The essential effect here consists of the fact that market-oriented organizations take the information obtained from market research and transform it into market intelligence that is then disseminated throughout the company. Its practical effects may be summarized in two conclusions:
 - Firms providing services on today's hypercompetitive markets must be market oriented in order to be competitive.
 - Market research, which may also enhance CRM practice, plays a key role in gathering data necessary for market orientation.

3 Material and methods

This is primary research and those, who responded, were mostly from middle management and top management. The companies addressed included small to large organizations in the field of aeronautics in the Czech Republic and in the Slovak Republic. The aeronautical industry is a high-tech industry, providing high added value. The industry is characterized by a high concentration of research activities and production capacity, and this is considered a benefit to other sectors.

Data was collected during the years 2009 and 2010. The participants used the printed questionnaires only; no one responded to the web questionnaire. The final number of fully completed useable questionnaires was 43. The questionnaire was developed in advance with questions measuring the level of CRM and the level of MO, and a number of additional questions. The intention was to keep the questions concise and unambiguous. After piloting, there were 40 questions on MO, 48 on CRM, 4 on corporate performance and 7 on specific information about CRM or MO, a section for

information about the company and the person responding and, of course, a place for comments. In the first three sections the respondents marked predefined response boxes only. A seven-point Likert-type scale ranging from 1 (absolutely disagree) to 7 (completely agree) was used to help the respondents express their opinion. Every question was designed in such a way that a higher point on the scale meant a greater inclination towards MO or CRM. The mean level of MO and CRM was established for each company. The companies were placed in ascending order and divided into two parts for each conception – highly market-oriented (hereafter referred to as MO), or less market-oriented (hereafter referred to as non-MO or without MO), and with a high level of CRM (hereafter referred to as CRM) or with less CRM (hereafter referred to as non-CRM or without CRM).

The dividing line was fixed at 5, because the value of 5 or more marks a real shift towards the concept, while a value of 4 means that we cannot say whether the company is orientated one way or another. Microsoft Excel and R project were used for computational analysis and graphic output.

4 Results

We are trying to prove or reject the following hypotheses:

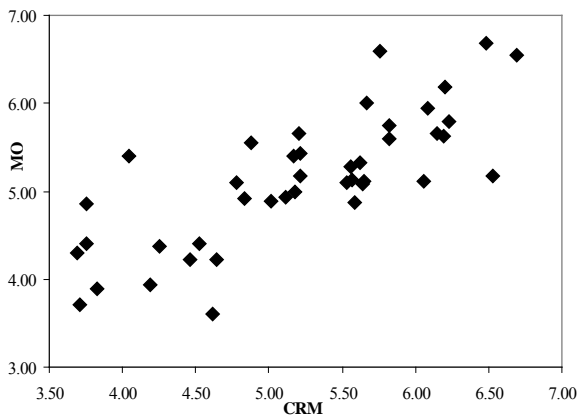
Hypothesis1: CRM and MO are interdependent (the higher one is, the higher the other will be).

The hypothesis that companies with a higher MO achieve a higher level of CRM was expressed. A correlation diagram (figure 1) is used to create an initial rough idea (conception). It can be assumed that there is a positive linear relationship between the degree of market orientation and corporate performance on the basis of this correlation diagram. The strength of this linear dependence is determined using a correlation coefficient. The empirical characteristics of the monitored quantities have to be determined for computation of this coefficient (table 1).

A correlation coefficient of 0.777 has been computed using these characteristics. Because the value of the correlation coefficient is positive, it can be said that there is a positive linear relationship between the level of MO and CRM. This correlation coefficient indicates a strong dependence. The 95 % interval of reliability for the correlation coefficient is (0.619; 0.874).

Because the investigation is based on a selective set of companies, this result is verified using a test for independence. It is assumed, based on the preceding computations, that there is a positive linear relationship between the monitored quantities (variables), and therefore a correlation coefficient less than or equal to zero is considered the zero hypothesis. The alternative hypothesis, i.e. a correlation coefficient higher than zero, is placed against the hypothesis above. The test criterion of 7.803 is then computed. The critical value of 1.648 is determined for the level of significance of 5 %. As the test criterion value is higher than the critical value, the zero hypothesis is rejected and the alternative hypothesis is accepted; this may be wrong in 5 % of cases.

It was confirmed in this way that the higher the level of market orientation, the higher the level of CRM, and vice versa.

Figure 1 MO and CRM

Source: own research

Table 1 Empirical characteristics

Monitored quantity	Sample mean	Standard deviation
MO	5.14	0.75
CRM	5.21	0.848

Source: own research

Hypothesis 2: the higher the level of CRM, the higher the corporate performance

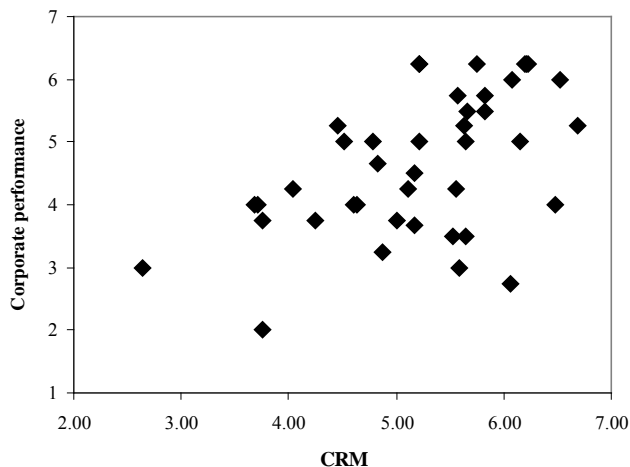
Another hypothesis we are trying to confirm is that companies with a higher CRM achieve a higher corporate performance. A correlation diagram can again be used to create an initial rough idea of the type of dependence (figure 2).

It can be assumed that there is a positive linear relationship between CRM and corporate performance on the basis of the correlation diagram. The strength of this linear dependence is determined using a correlation coefficient. Empirical characteristics of the monitored quantities are determined for computation of this coefficient (table 2).

The correlation coefficient has been computed and the value of 0.523 is positive. There is a positive linear relationship between the level of CRM and corporate performance, i.e. the higher the CRM, the higher the corporate performance. This result indicates a medium dependence. The 95 % interval of reliability for the correlation coefficient is (0.256; 0.715).

Because the investigation is based on a selective set of companies, a test for independence is used to verify this result. We assume that there is a positive linear relationship between the monitored quantities and therefore the correlation coefficient less than or equal to zero is considered the zero hypothesis. The alternative hypothesis, i.e. a correlation coefficient higher than zero, is placed against the zero hypothesis. The test criterion of 3.827 is then computed. The critical value of 1.685 is determined for the level of significance of 5 %. As the test criterion value is higher than the critical value, we reject the zero hypothesis and accept the alternative hypothesis; we may be wrong in 5 % of cases.

It was confirmed in this way that the higher the CRM, the higher the corporate performance.

Figure 2 CRM and corporate performance

Source: own research

Table 2 Empirical characteristics

Monitored quantity	Sample mean	Standard deviation
Corporate performance	4.650	1.132
CRM	5.210	0.910

Source: own research

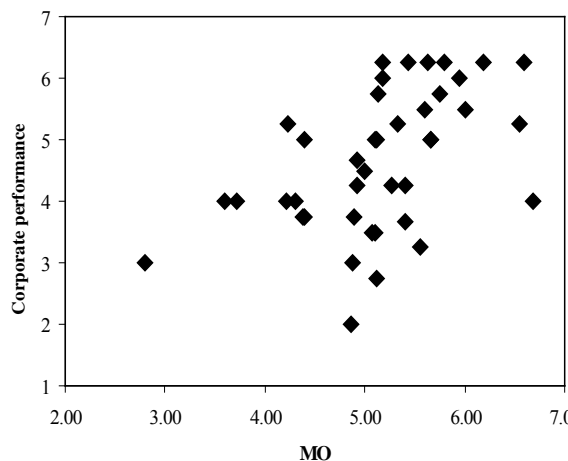
Hypothesis 3: the higher the MO, the higher the corporate performance.

We are trying to confirm that companies with a higher market orientation achieve a higher corporate performance. A correlation diagram is used to create an initial rough idea of the type of dependence (figure 3).

It can be assumed that there is a positive linear relationship between MO and corporate performance on the basis of the correlation diagram. The strength of this linear dependence is determined using a correlation coefficient. Empirical characteristics have to be determined for computation of this coefficient (table 3).

The correlation coefficient is 0.490. This is a positive value and we can say that there is a positive linear relationship between the level of MO and corporate performance. The dependence is medial. The 95 % interval of reliability for the correlation coefficient is (0.215; 0.693).

A test for independence is used to verify this result. A correlation coefficient less than or equal to zero is considered the zero hypothesis. The alternative hypothesis, i.e. a correlation coefficient higher than zero, is placed against the zero hypothesis. The test criterion of 3.512 is then computed. The critical value of 1.685 is determined for the level of significance of 5 %. As the test criterion value is higher than the critical value, we reject the zero hypothesis and accept the alternative hypothesis; we may be wrong in 5 % of cases. It can be assumed that the higher the MO, the higher the corporate performance.

Figure 3 MO and corporate performance

Source: own research

Table 3 Empirical characteristics

Monitored quantity	Sample mean	Standard deviation
Corporate performance	4.650	1.132
MO	5.140	0.798

Source: own research

Hypothesis 4: the view of the companies of their CRM coincides with the result of the questionnaire investigation.

Another issue interesting to us concerns whether or not the assessment of CRM by the companies is in line with the results of the investigation. The questionnaire investigation has again been stipulated as the fundamental document and two data sets are available. One set (X) concerns how the companies see their CRM, while the other set (Y) contains results of CRM obtained from assessment of the questionnaires. The remainder of the values of the two data sets above $(Y-X)$ represents a new data set that we can use for further work.

If the values of this new set are positive, this means that the companies are underestimating their CRM. If the values are negative, the companies are overestimating their CRM. If the values equal zero, the view of the companies conforms to the result of the investigation. The t-test will be used for further processing. The criterion of normality has to be met when using the t-test. In our case verified, using the Shapiro-Wilk test for normality. For the chosen level of significance 0.05 we compute the p value, which is 0.1. As this value is higher than the chosen level of significance, we do not reject the data normality hypothesis.

The choice of the hypotheses is based on the prerequisite that the remainder equals zero if the view of the companies of their CRM coincides with the result of the questionnaire investigation. The zero hypothesis (assessment of the companies is in line with the results of the investigation) is chosen if the average of the remainders is equal to zero. Under the alternative hypothesis, we understand that the average of the remainders differs from zero (assessment of the companies does not correspond with the results of the investigation). The empirical characteristics of the data set of remainders have to be known for computation of the test criterion (table 4).

Table 4 Empirical characteristics

Characteristic	Value
Sample mean	0.368
Standard deviation	0.921

Source: own research

We compute the test criterion, the value of which is 1.598, using empirical characteristics. We determine the critical value 2.131 for the 5 % level of significance. As the value of this test criterion is not higher than the absolute value of the critical value, we do not reject the zero hypothesis. Therefore, we cannot reject the hypothesis that the companies assess their CRM in the same way as our investigation. This means that the companies assess their CRM in the same way as our investigation.

Hypothesis 5: the view of the companies of their MO coincides with the result of the questionnaire investigation.

The procedure here is the same as in the previous case, the only difference being that we consider MO instead of CRM. As the basic requirement for data normality has not been met, it is necessary to use a non-parametric test. In our case, the Wilcoxon test will be used.

The choice of the hypotheses is based on the prerequisite that the remainder will equal zero if the view of the companies of their MO coincides with the result of the questionnaire investigation. Assessment of the companies in line with the results of the investigation is chosen as the zero hypothesis. We understand the assessment of the companies not corresponding to the results of the investigation as the alternative hypothesis.

The p value for the chosen level of significance 0.05 is computed. As the p value of 0.265 is higher than the level of significance, the zero hypothesis can not be rejected. It was confirmed in this way that the companies assess their MO in the same way as our investigation.

5 Discussion

Of 27 highly market-oriented companies, there were 24 with high CRM and only 3 without it. Of 16 less market-oriented companies, there were only 3 with high CRM and 13 without it. When we looked from the viewpoint of CRM, of 27 CRM companies there were 24 with MO and only 3 without MO. Of 16 non-CRM companies there were 3 MO and 13 non-MO. (The fact that the numbers are the same is merely coincidental).

Even from this layman's point of view, we see what we have suggested by a correlation diagram (figure 1) and have demonstrated by calculation (hypothesis 1). CRM and MO are interdependent and the higher one is, the higher the second will be. Moreover, there is a strong dependence. It was also important to see what hinders companies from becoming highly MO or highly CRM. The answers lie in the questionnaire.

When looking at non-CRM companies, we found the main shortcomings in relationships with employees and processes related to staff, customers and information. The largest gaps in the market orientation of non-MO companies lie in the areas of competition analysis, interfunctional coordination and analysis of suppliers. Within companies with a high level of MO, this gap lies mainly in cooperation with suppliers. We did not find any common shortcomings within CRM companies.

Although MO and CRM are similar, we have to remember that these two concepts are not exactly the same, which is why we should try to develop both of them while taking the specific needs and conditions of the individual company into account. We should mention that Kohli and Jaworski (1990) stated that MO is not necessarily the best orientation for all organizations in all environments. In any case, we believed that every company should take the best of MO and CRM and incorporate it into its processes.

The reason for this conclusion is the fact that the simplest form of CRM – the idea that “our customer is our master” – is good for each business. To ensure low-cost CRM we should add speed of reaction, listening and dialogue (communication), and proper management of information from customers to this idea (Chlebovský, 2005).

The same applies here as with any economic concept – we cannot just take it and apply it. To ensure the best results, we first analyze where we are, what we need, and how we can adapt a useful concept to our own terms. We need to ingrain such a concept into the work of each employee, to maintain, upgrade and control it, and never rest on our laurels. This sounds obvious, but a lack of compliance with this process is the reason why so many companies fail to implement CRM.

CRM and MO were found to be important to business performance. Tomášková (2005) mentions that the results of the Dawes study of 2000 indicate a higher correlation with the focus on competition in relation to corporate performance than on customer orientation. However, Harrison-Walker (2001) gave opposite results to the empirical survey. The argumentation is that corporate performance affects only the focus on the customer. Heiens (2000) showed that corporate performance has an equal customer orientation and focus on competition. Bigné et al. (2004) showed that an orientation towards distributors has a positive effect on their satisfaction, which may have a positive effect on corporate performance.

The outcome of our research on this topic is that both CRM and MO make a positive contribution to corporate performance. Another extremely interesting area is to examine how companies themselves see their CRM and MO. It is remarkable that we can conclude from the results of our research that companies assess both their MO and CRM in the same way as our investigation.

This finding is deemed to confirm the high predictive value of the questionnaire we have developed. Aside from the perspective of the companies themselves, the questionnaire was pre-tested on companies from different sectors that we know to be using CRM and MO principles in practice, and the results demonstrated the good predictive value of the questionnaire.

These findings must be considered within the limitations of this study. Conclusions for business as a whole may be drawn after comparison of experiences across business sectors from different countries, as this study focused only on aeronautical companies, mainly from the Czech Republic.

The results of this study provide many opportunities for future research. For example, we would like to find out if the level of MO and CRM is dependent on company size or type of the business. Another challenge is to figure out the best combination of MO and CRM.

6 Conclusion

This paper demonstrates that MO and CRM are mutually dependent, the correlation coefficient of 0.777 means a strong dependence. MO and CRM were confirmed to be important for an increase in corporate performance. Gaps in their application have been detected. When companies harmonize the positive aspects of these two concepts, they are on the best path to achieving high performance. Besides the positive aspects, there is also a need to focus on the shortcomings identified and to eliminate them.

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