COMPANY-LEVEL PROBLEMS IN THE INTRODUCTION AND OPERATION OF CRM SYSTEMS AT HUNGARIAN SMES

PhD dissertation theses

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1 The relevance of the topic

The complexity of internal procedures within the enterprises has reached a level where the use of IT management tools became a necessity. Fast development of business IT has helped large enterprises to develop strong capacities within this area. The introduction of IT systems prompted the rationalization of internal procedures.

SMEs took an interest in using IT assets as well. The market offered them a solution in the form of business management software – even though these did not cover all operations of the company, just some fields, still, they have made some procedures more transparent and economic.

With time, new ideas have arisen about the way companies should be operated. These were inspired by demands first by service providers who were interested in retaining customers and increasing the quality of their service.

To fulfill this philosophy, first they developed strategies to lessen the number of customers lost, then, based on the increased need for storing the related information, a software solution was born, the CRM (Customer Relationship Management) system.

The primary goal of a CRM strategy is to develop and retain customer loyalty. Customer loyalty means a dedicated activity of the customer, which presupposes a positive customer attitude and a consequential customer behavior.

The aim of using a CRM system is to organize the information arriving from various channels and to display it in a unified manner, sorting it by customers. Such cumulated customer history may improve the effectiveness of the company in the field of customer management and product development. It may define customer value and therefore it could further improve the effectiveness of handling important customers.

However, the introduction of a CRM IT solution is a summary of a complex series of steps, as a result of which the operation of the company may become more effective, its clients more satisfied, and generally the competitiveness of the company may improve.

The success of the introduction is greatly influenced by the strategy linked to the procedure of preparation and the introduction itself; how far the leaders of the company are dedicated to the new method of client management.

The situation of Hungarian micro- and SMEs has become very difficult as the result of the economic changes of the last years. The open European market, the economic crisis and the ever increasing competition demand fast reaction, which prove to be a serious challenge for these enterprises, which face a lack of capital and other resources. Therefore, companies in the SME sector pay an increasing attention to serve their customers at a high level. In order to this aim, they often seek an IT solution.

Should a company decide for an IT supported client management, it should be aware of starting a long, costly, but most probably valuable investment? The introduction of the system has several phases, and each phase will present different challenges.

This situation is serious and the problem is real – this is proven by the fact that software has appeared on the market which aims specifically to develop and track internal structural changes as a result of a CRM introduction. However, will buying a new piece of software really help a company that struggles with the rationalization of internal procedures?
2 Aims

The primary goal of my thesis is to develop a methodology model which is capable of providing support to SMEs in the entire procedure of the preparation, selection, introduction and operation of a CRM independently of the software chosen and if possible, of the industry in question.

The CRM introduction means a long-term relationship with the developer/distributor company, as well as a constant financial burden for the enterprise. Not only due to the infrastructure maintenance costs and the cost of the yearly software license – new solutions appearing on the market are also forcing an enterprise eager to achieve or to maintain a competitive advantage to take IT development into consideration.

During my research I aim to concentrate exclusively on the Hungarian micro- and SME sector. The reason for this is the fact that large enterprises operate under different environmental conditions (capital strength, creditworthiness). I am not researching public service providers, telecom service providers or companies in the banking sector, which are typical CRM users.

I have started my research three years ago and I planned it to last for three years. However, accessing the companies on this market was harder than I thought. The number of CRM suppliers is rather large, and the competition in this sector is strong. Willingness to respond to questions – given the expected length of the interview and the intent to protect insider information – was rather low.

In the light of the importance and relevance of the topic, I set out the following aims.

A1. Analysis of the procedure and general issues of the introduction of a CRM IT system from the viewpoint of the supplier in the case of SME users;
A2. Comparison of the introduction practice of CRM suppliers, comparison and analysis of successful and unsuccessful cases of introduction and operation of CRM systems;
A3. Revealing the motivational differences between CRM system suppliers and buyers; this could aid the supplier in formulating its marketing strategy and the buyer in formulating its needs;
A4. Segmenting the experts and users based on their views on the introduction and operation of a CRM system. Knowledge of these attitudes may help in the selection of experts participating in the introduction;
A5. Isolating the problems arising in various phases of the introduction, identifying the causes of the problem – using this knowledge the buyer may avoid the failure of the introduction;
A6. Developing a theoretical model and methodology which is capable of supporting the successful introduction of CRM systems independently of the software chosen providing support during the entire process of the introduction.

The results of the aimed research are expected to help in identifying and organizing the factors within and surrounding IT suppliers and CRM buyer SMEs that influence the introduction and operation of CRM IT systems. Based on this, a theoretical model and methodology could be developed that contributes to the careful planning of CRM introduction and their successful operation.
3 Subject and method

In this chapter I would like to present the structure and logical procedure of the research, as well as the main methodological elements and the reasons for their use. As there is only a limited literature on the introduction and operation of CRM systems, and even that mainly focuses on large companies, I performed a primary exploratory qualitative assessment.

For the purpose of analyzing the Hungarian CRM suppliers and users, I organized my research around the following two primary quantitative assessments:

1. The views of CRM suppliers on the motivations of CRM users to introduce CRM systems and the characteristics of the operation of the CRM. – Online questionnaire after a previous personal contact in all cases.
2. How Hungarian SMEs introduce and operate CRMs – Online questionnaire to CRM users through the distributors of CRM software.

3.1 Results of the qualitative research, research sample characteristics

During my interviews, I contacted and talked to a representative professional of fifteen software developer companies. In all cases I talked to professionals who knew the market, had several years of experience and participated in several CRM introductions. Three of the chosen companies are targeting large or large medium enterprises with their products, developing with a large company environment in mind. Twelve interview subjects were representing software companies who prefer SMEs as clients, their products can be introduced with a smaller investment. Five of the fifteen companies have foreign parent companies (in the US, Germany, or Sweden), they are adopting the software to the domestic market and include their own developments.

As concerns the type of the software used, two interview subjects are distributing cloud-based systems, one distributes solely retail software, one offers retail software and individual development as well, while the other eleven are present on the market with standard solutions. Two companies also offer industry-specific solutions.

The interviewed companies were characterized by two types of data. One was the number of clients, ranging from 3 to 30. The other was the number of employees using the system. Here the answers ranged from tens to 2000; these are approximations as no interview subjects had exact data. The answers were influenced by the fact that several companies could only indicate those clients in their answers who agreed to the use of their name as reference. Additionally, another tendency could be observed: where the distributor has a foreign parent company, that company may offer remote access to its servers. This affects distributors active on the international market. For them it is hard to assess the number of domestic clients, as the parent company of the distributor may be offering remote access to a Hungarian subsidiary of a foreign client. The Hungarian CRM distributor will not know about this, as the license agreement was signed in the country of the parent company and access to the CRM system is provided from there.

3.2 Circumstances of the qualitative research, expert and user sample characteristics

Data collection started on 30 April 2013 and I closed it on 18 October 2013. I contacted 57 distributors asking them to fill out my expert questionnaire and to forward my user questionnaire to their clients. I received 31 expert answers and 104 user answers. This means that 54% of the distributors (experts) have answered.
However, only estimations can be given on the percentage of user\textsuperscript{1} answers, as no exact data is available on the number of users that have received my questionnaire. The estimate value was calculated based on the total number of clients of the software distributors contacted; this is about 1300-1400. Hence, the user response ratio is about 12-13\%, which corresponds to the typical answer ratio of research conducted in the corporate sector.

The expert questionnaire was sent to 57 CRM system providers who are involved in the introduction, development and support of CRM systems. I was paying attention to possibly contact a variety of experts as concerns the type of CRM systems introduced. Only three of them were of my previous interview subjects. Of the 31 experts, some were introducing installed software while others offered a cloud-based service. There was also a variety in the size of their clients, ranging from micro-enterprises to medium-sized or large companies. All software companies did continuous development, and some of them offered individual development as well.

The 31 experts had a total experience of 170 years. The most experienced works for 13 years as an expert and six of them has more than 10 years of experience; the average work experience is 5 and a half years. 11 experts worked on the introduction of 3 or more types of CRM systems, while 10 of them had experience yet with only one type.

The user target group of my research was SMEs using a CRM system. Unfortunately, no information is available on this statistical population. As a result, the ratio of CRM users within various company categories is not known.

More than half of the respondents have less than 10 employees and three fourth of them less than 20. Only 9\% of them are a medium-sized company.

The sample cannot be considered representative based on either the data of the Hungarian Statistics Office (KSH) or the categories set out by the EU.

In comparison to the data of the KSH, manufacturers are underrepresented, while service providers are overrepresented in the sample. The reason for this may be that CRM systems were mainly introduced by service and retail companies, while its use is not yet typical at manufacturers.

\textsuperscript{1} ‘Users’ are here companies who have bought a CRM system from the software distributors. I asked each company to fill out exactly one questionnaire.
4 Results

4.1 Processing the interviews

Based on the literature I collected the critical points of CRM introductions, the general pitfalls, and I formulated the questions around these.

Characterizing the companies introducing a CRM, the respondents could not indicate a typical industry. They said to have clients both in the manufacturing and the services sector. They mentioned several motivation factors. It is primarily the market stress, the serious competition for clients that motivates clients to introduce a CRM system as a need for marketing support arises. Another motivating factor was state aid offered to help IT projects, as well as the cases where sales experts with experience at multinational companies appeared as new employees at SMEs.

There were great differences in product selection criteria in the case of various CRM purchasers. Often the client has no expertise in CRM systems and the connected IT solutions, furthermore they negotiate without bringing an advisor or expert along, and therefore their decisions on matters beyond the price will be subjective, superficial and often unfounded. The economic crisis had no positive results. Hungarian companies did not recognize the importance of customer retention in this situation. It is mainly companies with foreign parents who have an own introduction strategy. At these companies the introduction is performed following a central strategy developed basing on international experience. US, German and Swedish parent companies require a high level of support in this area as well from the representatives in every country. Two of the respondents mentioned an introduction failure rate higher than 50%. They are of the view that more than 50% of their clients are not using the system after its introduction, regardless of education, good support and proper preparation. Everyday tasks and user resistance often raise serious issues at the company introducing a CRM. Another serious issue is raised by previously unplanned tasks becoming part of the everyday routine. Concerning the duration of the introduction, answers moved on a broad scale, from the current week to one and a half years. Among the auxiliary services offered to the system, education and support were mentioned uniformly. Some mentioned advisory services at the development of the system plan, the assessment of existing hardware and the purchase of new hardware at a good price, periodical updates, patching and remote support.

Based on the experience of the IT suppliers it can be said that there are frequent cases where a CRM is introduced but not used; the reasons for this may be found in using a wrong procurement model. Usually the problem is caused by the non-optimal size of the procurement unit and its members not having the proper professional qualities. Choosing a supplier without an objective set of criteria is a very risky endeavor. The draft contract of the IT companies always foresees potential mistakes to be made by the purchaser; however, the purchaser often fails to contemplate its own potential and its limits.

4.2 Results of the qualitative research – formulating the theoretical model

After processing the secondary data and making the expert interviews, as well as reviewing the internal introduction methodology materials of three companies I fund that the process of the introduction can be divided into two large parts given the participants. This way we can talk about the tasks of the company introducing a CRM (points 1 to 4) and the tasks of the CRM supplier (points A to C). The tasks are further defined by their position in the three well-definable phases of the chronology of the introduction. Thus we can distinguish between tasks before, during and after the introduction. The period before the introduction can
However be further split into two large areas, divided by being before or after the system selection. I have formulated my methodology model along these categories.

As a first step I defined the phases that determine the tasks of the company introducing the CRM and the supplier. Following the chronological order, I decided the phases of the introducer side into 4 main segments (pre-selection phase, post-selection phase, introduction phase, post-introduction phase). Based on the same chronology I divided the phases of the supplier side into 3 main segments (post-selection phase, introduction phase, post-introduction phase).

4.3 Analysis of the results of the expert questionnaire

One of the aims of my research was to analyze the views of the expert side on the reasons and demands behind a CRM introduction, including the order of importance and sectorial characteristics of these reasons and demands, as well as the view of the experts on the successfulness of CRM operations.

81% of the experts think that the introduction of a CRM is prompted by an increase in the number of clients at the purchaser. 60% have felt an increase in the number of interested companies as a result of the crisis. Nearly 65% reported a stagnating or slowly increasing number of introductions. This also shows that the purchaser side, even if slowly, but does start to estimate the business advantages of increasing the quality of client service and do show interest in obtaining IT support in this field.

Experts generally do not consider the software to be an industry-specific solution, but there are some fields where there are more purchasers or interested companies. 65% of the experts are of the view that companies in the services, retail and B2B sector and companies with customer service units show demand more frequently for a CRM introduction.

One third of the experts say that the industry they represent does not have an own introduction methodology. This means that they are unable to support the success of the introduction by any conscious, pre-planned way. The remaining 70% has an introduction methodology; however, it is their „own” methodology, meaning that it applies methods valid for the software offered, after the period of the selection. Based on the interviews it can be presumed that suppliers consider planning the introduction steps individually for each company to be a methodology, meaning that there are no pre-defined standard steps in the project.

Reporting on the success ratio of the introduction, more than 40% of the experts said that a half or more than half of the introductions are unsuccessful. Only 13% said that their experience shows full introduction success.

Via a cross-table analysis I examined the correlation between the existence of a methodology and the rate of success. 66% of those who did not have an introduction methodology reported that they have less than 50% of unsuccessful introductions, while those who had an introduction methodology had less than 31%. A look at the suppliers below 50% success rate shows that more than half of them have no introduction methodology.

My variance analysis proved that those who reported that they have an introduction methodology said in significantly higher numbers that the motivations to introduce a CRM include the increase in the number of clients (p=0.003) and the demand to trace internal procedures (p=0.024). Based on the cross-table analysis one can say that in the result of both analyses the continuity correction and the probability ratio both showed significant results.
The correlation strength showed values between 0.47 and 0.55 which presumes a correlation of medium strength. Those who have an introduction methodology are more inclined to think that market price is an influencing factor during the selection procedure (73%) compared to those who do not have a methodology. The reason for this may be that distributors with a methodology are most probably offering standard solutions, while distributors without a methodology are selling retail or cloud-based products. No experts indicated fast introduction as an important factor.

**H1** The methodology principles become known after the software selection. This knowledge is received from the developer company, and is therefore strongly linked to the developed solution.

The above calculations show well that a large part of the suppliers does not have an introduction methodology. It is also visible that the lack of methodology lowers the chance of a successful introduction. Those who have an introduction methodology see the reasons for the introduction differently than those who do not have such a methodology. My interview subjects all said without exception that the introduction methodology of all CRM products they know is the intellectual product of the distributor, supplier or developer, and it does not contain any recommendations for the selection or pre-introduction period. The purchaser does not learn about the methodology directly, it only receives recommendations from the contact person for the steps that follow.

**Based on the above I accept my first hypothesis.**

### 4.4 Analysis of the results of the user questionnaire

During the analysis of the user answers first I was looking for the answer to the question whether the purchasers are properly informed when selecting a CRM system.

The answers showed that 88% of the purchasers checked out the offers of less than 5 suppliers. In half of all cases the manager was the sole person involved in the decision-making, no external company or internal employee was invited to participate. Only 2% reported that a team consisting of more than 5 people met the supplier and formulated their views on the selection. After the choice was made, 77% of the purchasers met less than 5 times with the supplier for consultation. These consultations could enable the supplier to learn about the operations of the company and to discover deficiencies. This is aggravated by the fact that one third of the suppliers provide no methodology support to this critical procedure.

My further analyses have shown a significant correlation between the small number of consultations and the necessity to modify the project. The observed Pearson Chi-Square value between the two variables was 13.613, which, examined even at a 0.003 dual significance level exceeds the theoretical limit value that was a significance level of 5% in my research.

A cross-table analysis has shown significant correlation (p=0.013) between the number of participants in the decision and the decisive factors of the selection. Where solely the manager was involved in the decision, fast introduction was the decisive factor in the selection, (adj. Residual value 3.2), neither the links to existing procedures, nor the ease of use played a role.

**Based on the results of my calculations I accept my second hypothesis, that**

**H2** Purchasers do not have proper IT knowledge to choose a CRM software. They have a lack of information concerning the choice, introduction and operation of such software. As a result they formulate their needs inaccurately; they do not set up objective criteria for the software selection.

Thereafter I have examined whether CRM purchasers have a conscious client management concept. My hypothesis on this was that
The potential CRM purchasers have no client management concept; they expect the software or the software supplier to formulate this.

I examined the attitude towards the three most important strategic issues of the respondents who were forced to modify the project as compared to those who did not have to modify the project. I have found that those who were forced to modify the project indicated on a scale of 10 a lower average in the importance of: mapping company readiness, rationalization of procedures and developing a client management strategy. The difference was 1 to 1.5 between the averages. A significance test performed with variance analysis proved \( p=0.002 \) that the importance of a client management strategy is missing at those buyers where the project needed modification during the introduction.

Those who modified the steps of the project as compared to the pre-planned steps have more often valued these strategic areas with 5 or less points. Although the importance of involving an advisor company generally received low values, the companies who modified their projects valued the importance of external advisors higher, which proves that the experience of the introduction suggests them that the tension caused by the introduction procedure should be eased with external aid.

Based on the above I accepted my 3rd hypothesis and I see my assumption verified that in the majority of cases the purchaser lacks a client management strategy and they expect the conceptual development of this strategy from the software supplier, the software itself or rarely from external advisors.

**H3 Companies introducing a CRM have excessive expectations regarding the changes in workforce needed. As a result of the introduction they expect the possibility to reduce the workforce, not expecting the appearance of new tasks induced exactly by the CRM introduction.**

Although this hypothesis seemed to be reasonable based on the expert interviews, the quantitative analysis of user answers did not support its validity. 98% of the respondents said that they did not except a decrease in the number of employees as a result of the CRM introduction. At a response rate this high no correlation analysis would be intelligible; therefore I did not analyze whether any connections with the actual number of employees, clients, the company profile or the number of participants in the decision-making process. **Therefore I reject my 4th hypothesis.**

Concerning the practice and tasks related to the operation of a CRM system I had the hypothesis that

**H4 The current practice of use is linked to the advice of the software developer.**

71% of the respondents checked out the offer of 2-5 suppliers before making their choice. 18% met only a single supplier. Besides this, in 51% of all cases a single person has decided on the choice of the CRM software to be used by the company. There is a significant correlation between the number of offers checked and the number of decision-makers \( p=0.044 \). Taking the residual value into consideration as well one can say that the less people were involved in the decision-making process, the smaller was the number of suppliers examined.

Furthermore, even though 61% of the respondents gave a 9-10 point value to the rationalization of procedures, only 54% gave the same value to a client management strategy, and 10% gave a value smaller than 5 points to this factor. Company readiness was given higher than 8 points by only 40% and 25% gave less than 5 points to this.

At the same time 74% valued CRM-related training at 9-10 points and only 5% gave less than 5 points to this area. 44% considered the constant system overview by the supplier to be very important.
All this shows that the expectations towards the supplier segment are very high, especially in the field of training and support. At the same time the companies introducing a CRM value their role and responsibility lower, they consider it to be less important.

**Based on this I accept my fifth hypothesis.**

Thereafter I examined what preconceptions the purchaser may have during the software use. Based on my secondary research and deep interviews I presumed that the purchasers do not identify properly the change of administrative tasks resulting from the introduction of the software.

**H5 Companies do not estimate properly the increase in administrative tasks related to the CRM introduction, these tasks would secure the supply of data to the various work fields**

62% of the respondents reported a significant or small decrease in administrative tasks. Only 23% said to have experienced a small increase. No companies perceived a significant increase as a result of the CRM introduction.

Based on my calculations it can be said that there is a significant correlation between the company profile and the evaluation of the change in administrative tasks (p=0.049). Based on the residuals, the strongest correlation could be measured at the manufacturers (2.9). This can be attributed to the circumstance that CRM introductions are causing most possibly the greatest changes in client management procedures at these types of companies. At service providers and retailers, there are at least existing (even if bad) client management procedures, therefore there is a tradition to have related administration in place.

**Based on the answers to the questions I reject my 6th hypothesis.**

I continued my research with examining other issues that may arise in relation to software use. I assumed that

**H6 Companies do not calculate with constant fees and other costs arising after the introduction of the software. At the time of the introduction managers do not foresee related continuous costs in the future.**

Only 15% of the respondents said that during the operation of the CRM software, constant fees or costs have arisen that were not previously planned.

However, the number of consultations show a significant correlation to unexpected costs (p=0.012). If the number of consultations with the supplier was low (lower than 3) or too high (higher than 10) (residual value exceeding 2) this has influenced the appearance of unexpected costs. I see the reasons behind this as follows. If the number of consultations is low, the purchaser is not informed properly on the operation of the software. If there are too many consultations, the purchaser receives too much information from the supplier and as an effect, modifies the project – this was proven during the analysis of my 2nd hypothesis – or may request individual developments from the supplier. In order to prove this I performed another cross-table analysis, which showed that there is a strong correlation between a large number of consultations and a request for individual development. The significance level is p=0.002 and the residual value is 3.1, based on which it can be said that a high number of consultations surely go along with individual development.

The number of people involved in the decision-making, the number of suppliers checked out or the company profile did not show any correlation to the appearance of unplanned costs. Although most of my respondents gave a negative answer to this question, I think further research would be necessary to examine exactly which costs are related the introduction of the software.

**Based on my results I partially accepted my 7th hypothesis.**

Based on the main component analysis I could define three well separable components that are of great importance for my respondents and belong together according to their evaluation.
The examination and analysis of the final model seems thus to verify my original hypothesis that based on the answers of the supplier and the purchaser side three sets of variables can be separated that are not correlating to each other and keep the information content of the different variables to the greatest extent. These three sets of variables represent the groups of human, strategic and technology variables. Thereafter the attitude of the respondents can be examined alongside these components.

I aim to formulate my clusters along the main components outlined above and I examine which segment accepts or rejects which main component. Respondents belonging to cluster 1 are the technocrats. For them, technology support and technical background is the most important. They strongly reject human factors to be influencing success and – although less rejective about it – also consider strategic steps to be unimportant. 90.3% of respondents in this cluster are users and only 9.7% of them are experts. 26.9 % of all users belong in this group. Users like this involve IT experts in the introduction, regardless of the specialization of the IT expert. In practice, this often means selecting the system operators at the company. During the software selection, the decision is based on the comparison of software and hardware elements. These users usually make their decision alone. 85.7% of them have found the supplier of the introduced software on the internet. IT experts know the real purpose of the software better and hence they usually got into the other two clusters. Only 10% of them belong to the technocrats (table 21). These experts have a maximum of some years of experience and have followed the introduction of a maximum of 2 different software types. They have characterized the success rate of their introduction as being significantly low, indicating a success rate of 50% or less.

The members of the 2nd cluster are the resistants. They have undervalued the characteristics of all three components. They are most rejective against the technological characteristics; their attitude towards the other two components is similar. 23.1% of the users belong to this cluster, and they form 70.6% of the cluster. Most possibly they are those who purchase the system and then operate it on a “come what may” basis. They are not preparing for the introduction, „they do not make too much fuss about it”. 54.2 % of them do less than 3 consultations before the introduction. They see the solution to all problems in the introduction of a CRM system. They usually take their decisions alone (40% of the users in the cluster do).
The introduction in the case of the resistants result in a feeling of failure in most cases, as the software does not solve their problems, rather it gives rise to new ones. These respondents took their information in 95% from the competitors, thinking that if the software was good for them, it should be good for us too. This decision greatly hinders gaining a market advantage. 50% of the users belonging to the cluster indicated the ease of use as the decisive factor of the software selection. 75% of the users belonging here looked up and found the supplier on the internet. 33.3% of the experts got into this cluster. Most probably these experts are selling software solutions on the market that belong to the so-called retail solutions and follow the principle of „take and use”. Retail solutions among cloud-based products belong here as well. User support usually consists of a one or two-session mass course where users receive general user guidelines after a common presentation. At selling they emphasize that the user should start using the software instantly and they promise instant results through the data being entered into the system. 80% of these experts were involved in the introduction of 3 or less different types of software and only 20% of them have 8 to 10 years of experience. Their introductions are successful in a rate of 50% or higher. The members of the 3rd cluster are the receivers. They have a positive attitude towards all three main components. The human elements are the closest to them, their attitude towards the other two components are similar. 50% of the users belong here and they make up 75.4% of the cluster. They are most probably those respondents who try to decide after a thorough preparation; however, they do not weigh the tasks properly and do not set up an order of importance. Therefore their attention is spread too wide; they are torn apart because of the multitude of the tasks. They are lost among the criteria of software selection and finally they decide upon factors that are not necessarily professional or which do not correspond to their aims. 50% of the user respondents make their decisions in a team and 60% of them consult 3 or more times with the supplier before the selection. A significant amount, 86.4% of user cluster members indicated the tracing of internal procedures as the reason for the CRM demand. Most probably they sense their internal procedures to be complicated, however, their views on involving an external expert show a very large spread. Their introductions may therefore result in a feeling of failure as well. They are making their decisions based on the recommendation of an on other supplier (this is significant, 100% of those in cluster decide this way). 62% of them checked out 2 to 5, while 15% checked out more than 5 supplier offers. 57.7% of the experts belong to this cluster. Most possibly the representatives of medium sized and large systems belong here. 55.55% of the expert members of this cluster have experience with the introduction of 4 to 5 different systems and 8 to 10 years of experience. They consider their success rate to be good significantly (p=0.003) and estimate their success rate at 75%.

4.5 Validating the path model

My path model consists of two parts, with separate result variables. One part contains the stage of preparation, while the other part contains the stage of introduction. The path model is essentially a series of regression models that are built upon each other. The path analysis presupposes some kind of order among the variables. This connection of order is in most cases time. The order of my process model based on the interviews with IT suppliers is based on time too. To make answering the questionnaire easier and to increase the willingness to answer I put the elements I found to be the most important from the phase model on the questionnaire. Based on this I changed the process model, and I prepared the path model taking this as a basis. I separated the tasks that belonged to the project management in the original process model, and I do not analyze issues related with those
tasks in the path model. As a result my path model consists of two parts with separate result variables. One part contains the stage of preparation, while the other part contains the stage of introduction.

**Figure 1 Path model analysis of the preparation stage**

The explanatory ratio of the path model based on the sample is 32.2% (R. Square 0.322) this means that the model explains 32.2% of the factors influencing the tasks arising in the preparatory stage of the introduction, 68.8% depends on other factors. I theorized that the information of the employees would be influenced by a strategic and a human component variable, however, the linear regression analysis did not prove my hypothesis. The figure of the model shows well that according to my respondents the continuous support by the management cannot be considered to be altogether continuous. Its effect can only be proven in respect of some strategic issues. Those who consider continuous management support to be important also handle the development of a client management strategy and the exact formulation of needs as important strategic issues, but do not formulate uniform views on the assessment of financial means or the rationalization of processes. Based on the results it can be said that the proper planning of strategic tasks have a serious indirect effect on the preparation necessary to a successful CRM introduction.
The second path model based on the sample summarizes the introduction stage. Its total explanatory ratio is 27.6% (R. Square 0.276), this means that the model explains 27.6% of the factors influencing the tasks arising during the introduction phase, 72.4% depends on other factors.

I assumed that the supplier system oversight and the testing of the software affect each other as an iterative cycle; however, the significance level of the F test belonging to the beta value of the regression analysis has not supported this assumption. Thus it can be said that those who consider the supplier system oversight to be important consider it very important to stay in contact with the supplier and to meet its other customers regularly to share their experience, however the same companies have very different views on the test operation. There is a rather large spread in their answers. Continuous management support does not seem to be actually continuous in this case either; it only has a strong effect on the test operation.

The client meeting as a final, dependent variable is being influenced by all variables. It can be seen that the system of consequences in the path model based on the expert model is valid, the individual elements of the strategic, human and technology components are built upon each other and observing them in the dimension of time they have an influence on the entire introduction process and its success.
5 New and novel scientific results

During my research I looked for the answer to the question what similarities there are between the views of suppliers and purchasers on the decisive reason for choosing a specific CRM and the motivation factors for the introduction.

S1. The difference in the views on the reasons of the choice and the motivation for the introduction fundamentally influences the success of the introduction. The analysis proved that the supplier side does not see properly the intent of the purchaser; the market participants do not know each other well enough.

The results of my quantitative analysis have shown that the two participants in the introduction have significantly differing views in many aspects. The supplier side sees the motivation of the purchaser for the CRM introduction differently and they have different views on the factors defining their decisions as well. Revealing this may help the supplier side to formulate a proper marketing strategy in the field of software sales and to adjust their communication to the demands of their future clients.

Based on the answers of the supplier side and the purchaser side, three sets of variables can be separated: human, strategic and technological factors. The results of my questionnaires show that the (human, strategic and technological) factors defining the preparation and the introduction can be identified among the Hungarian suppliers and purchasers.

S2. Identifying the (human, strategic and technological) elements of preferences in the preparation and introduction habits, effecting the decisions of Hungarian CRM suppliers and purchasers, give basis for efficient planning and implementing related to the preparation and the introduction.

Based on the results of the research I have proved that these factors play an important role in the success of the introduction for the respondents. The examination was performed using quantitative methods: main component analysis and component testing.

S3. Forming and characterizing segments of the supplier and the purchaser side based on their relations to the tasks of preparation and introduction can be used to define the competence of experts and to aid the selection of members of the leading team in connection with an exact project.

My results show that well-separable groups can be identified along the factors defining the preparation and the introduction. The differences between the individual segments can be well characterized. Hence I characterized the experts based on their success and experience, as well as the participants on the purchaser side based on their manager decisions and software selection criteria.

My aim at formulating the model, the methodology and the list of statements was that it should help the development of a client management procedure, the selection, introduction and operation of a CRM IT solution at companies of any size, possibly without presupposing any special professional knowledge.

S4. The introduction methodology and model I have prepared defines three main series of steps: pre-introduction phase, project building phase and introduction phase, helping in the overview of the entire process of the introduction and in understanding the relations between its elements.

Choosing time as the organizing factor I prepared a process model for the entire process of the introduction which show the existing system of effects and helps in identifying possible mistakes. In my theoretical model I organized the preparatory and introductory steps. Taking
the statement of the scale measuring the most important tasks of the preparation and the introduction as a basis I validated the research model in a quantitative way with a process model analysis on the basis of the answers of 31 experts and 104 managers involved in a CRM introduction, as a result of which I pointed out the possible pitfalls of a software-independent introduction procedure and I formulated suggestions for possible ways to avoid them.

**S5. The theoretical model is supplemented with a statement list that assesses user needs during the preparation and the introduction and helps in the overview of the related tasks, by the use of which the purchaser side receives software- and industry-independent support.**

As a result of performing the expert interviews I revealed the critical points of the entire introduction process. Examining the process from the supplier side and the purchaser side I segmented it to stages, revealing the typical problems for each stage and characterizing the stages. A statement list was developed that is able to call the attention of the purchaser side and the supplier side to the most important steps during the introduction and to support the success of the introduction independently of the software used. The examinations were performed using a qualitative method, text analysis.
6 Conclusions, suggestions

Having mapped the IT introductions it can be said that CRM introductions are mostly characterized by the feeling of failure from the side of both the supplier and the purchaser. The number of introductions does not decrease despite these feelings of failure and experts hope for a slow increase as a result of the improvement of the conditions after the waning of the economic crisis. During my research I could not aim to have a representative sample as no data is available on the statistical population. Based on the estimation of the experts, one can estimate that the yearly number of CRM introductions is 10 to 20. This is, however, the number of systems actually needing an introduction. The spreading of cloud-based systems increases, even multiplies this number. However, these software solutions often do not provide proper CRM background service, only sales support, which is only a fraction of the tasks of a CRM.

In order to avoid introduction failure, both the supplier and the purchaser has important tasks to fulfill. The answers to the expert deep interviews revealed the general procedure of IT introductions and surfaced the general problems which appeared in expert opinions independently of the software introduced. Based on the expert answers, the stages of the introduction could be separated and their division points could be identified. These segments were characterized by the participants involved in them. (A1)

As a result of my research I developed a phase model which is able to compare the tasks of the two parties participating in the introduction. The model supports the purchaser side from the moment when the need for a CRM introduction arises in order to perform all background tasks serving the successful introduction, to perform all preparatory tasks. It leads the introducer side through the entire process of the introduction, reminding it of the most important tasks.

A company introducing a CRM is currently not supported by any practical guides. The majority of the software suppliers are unable to give proper methodology support even after the software choice was made. There are no pre-defined strategic steps; the company receives only software-dependent guidelines that are required for the use of the technology. (H1 proven)

It is very important that managers should not experience the purchase and introduction as a failure, as an „unnecessary squander of money“. Often if the company is not ready for an introduction from a structural or IT aspect, the development of a new organizational structure or the adoption of a well-defined client strategy is enough for the positive effects of the CRM to be felt by the management.

Based on the answers of the experts of companies providing introduction support, I performed a comparative analysis with a qualitative method on the cases of successful and unsuccessful introduction, doing a textual analysis. I examined the most typical pitfalls of a CRM introduction, isolating special elements and defining the problem fields.

As a result it can be stated that the lack of a client management strategy on the purchaser side and the lack of an introduction methodology on the supplier side increases the number of failed introductions. (A2)

The methodology process model created based on the conversations with the suppliers indicates the individual tasks at a timeline, helping the communication, process planning and project task definition of suppliers and purchasers.
No reliable data is available either on the supplier or the purchaser market. Therefore the views of the two sides of each other are based only on experience. Even if the suppliers (understandably) have more experience, this experience cannot be generalized to cover the entire purchaser side. One of the aims of my studies was to reveal the real motivation factors behind the choice and introduction of a CRM system and to compare this to the picture developed by the supplier side. (C3)

Based on the results of my quantitative research I can say that the software supplier side does not see the motivations and demands of the purchaser side properly. They develop certain views on the purchasers and a hypothesis on the reasons behind their decisions based on general knowledge about consumers. This is well shown by the example that Hungarian customers are always shown in the media as being extremely price-sensitive, in almost any fields they are primarily influenced by the price. Similarly, the supplier side considers the CRM purchasers to be price sensitive and holds price to be the decisive factor of software choice. However, my research has shown that the supplier side did not consider price to be of primary importance at an important decision like a CRM introduction. This difference may be of importance from the viewpoint of software sales when formulating a marketing communication. (S1, table 8, diagram 17)

My research has proven that the supplier side is not properly prepared IT-wise and often the strategic preparation for the CRM introduction is missing as well. As a result the purchasers formulate their needs inaccurately and they do not set up an objective set of criteria towards the software to be introduced. They do not handle the introduction as a project and they expect the methodology aid to come from the supplier. (H2 proven, H3 proven, H5 proven, diagram 15)

However, it has also become evident that the respondents do not turn to the CRM solution in order to reduce the necessary workforce. They do not except that the introduction of the software will enable to reduce staff numbers. They do not feel their administrative burden to have increased, even if the introduction of the software does change that burden and due to the current regulation it leads to its increase. (H3 rejected, H4 rejected, diagram 16)

However, my hypothesis that the companies introducing a CRM are not prepared cost-wise can be partially proven. Although the majority of my respondents reported not to have experienced any unexpected costs during the introduction and the operation, where the software was introduced after a small number of consultations, project modifications and an increase in costs were necessary. (H7 proven)

This result is not in line with the views of the suppliers and previous country-wide research, which, based on the comparison of planned and fact project numbers diagnosed on overstep of planned costs in a large percentage of cases. At the same time it should not be forgotten that all respondents at the purchaser side were companies who are actively using their system, considering their introduction as successful and having a good relationship with their supplier. All purchasers reached by the research have received the questionnaire from their suppliers; therefore it can be assumed that in the majority of the cases it was the satisfied users who have responded.

In the next part of my research I used factor analysis and then main component analysis on the views of the respondents on the preparation and the introduction, where they assigned a value of importance to the various tasks on a scale of 1 to 10, 1 being the least important, while 10 being the most important. (C4)

The explained variance of the various main components is split roughly proportionately. Of course the results of the survey cannot be considered as a basis for conclusions for the entire
domestic market given the deficiencies of the sampling; however, the general trends can be shown based on the answers of the suppliers and the purchasers.

It can be stated that the respondents divide the procedure of the preparation and the introduction into 3 main parts. The first contains steps containing strategic issues, involving the rationalization of processes, the exact definition of demand, the development of a client management strategy, the mapping of company readiness and the exact mapping of financial potential. Although the weight of the various factors does not show large differences, the sequence here is not chronological, but that of importance based on the factor weights. (table 12).

The second main component contains technology issues, involving the use of an error-free database, the definition of access rights and the management of the test operation during the introduction. The order here again shows the order of the score values. (table 13)

The third main component contains the human factors. In the order of factorial weight these are: client meetings organized by the supplier, experience sharing, continuous management feedback, continuous system overview by the supplier, continuous management support and the involvement of an independent advisor company in the process of the preparation and the introduction (table 14)

These interrelated elements reach over the examined stages. The groups formed of the various variables are independent of the stage of the introduction in which the given task arises. However, the technology component is an exception to this, as its appearance only makes sense after the selection.

During the evaluation of the data on the attributes of the preparation and the introduction it has turned out that there are great differences in the views of the suppliers and the purchasers within their respective groups on the importance of the various steps. The noteworthiness of the differences is shown by the fact that the average values of the statements contained large spreads. In order to separate the respondent groups I performed a K-means cluster analysis. Based on the results of the assessment, three segments could be separated (table 18, C4).

I characterized these segments along the main components and I analyzed what common characteristics their members may have. These three clusters became the groups of technocrats, resistants and receivers. The significant differences between the three segments along the main components contain 2 similar F values and one smaller, meaning that in the formulation of the cluster, two dimensions participated in similar proportions and one to a lesser extent. The weaker participation of the strategic component shows that this has received the smallest weight in the various clusters (table 19).

After this I analyzed the proportion of representation of the two groups (expert and purchaser) in the various clusters. I have found that in all clusters both the expert and the user group are represented. After this I analyzed what common characteristics can be found valid for the members of the two groups within the various clusters. Based on my analysis, the individual characteristics of the users and experts in the three clusters could be well defined, and strong differences could be found between the various groups. (diagram 19, S3)

The main aim of my research was to develop a methodology through the use of which the introducer side receives software-independent support during the entire CRM selection, introduction and operation procedure. For this purpose, based on the results of the qualitative and quantitative research I separated the issues arising in the various phases of the project. I defined the direct and indirect effects of the various factors on each other via a linear regression analysis on a path model. (A6)
I divided the methodology model into three well separable parts, and then I validated the model developed for the concrete tasks of the preparation and the introduction. Based on the analysis of the path model it can be found that management support does not appear properly in the process of IT preparation and introduction. The lack of management support could be measured only at some critical points. This shows that management support is not constant; managers only enter the process when problems arise. Practically they are constantly handling crises during the introduction, managing operative tasks and they cannot concentrate on strategic steps. It was also visible that the use of external advisors has led to contradictive results. Demand may arise for an advisor to improve the readiness of the company, however, in the later steps, the advisor has no influence on the process, its presence is not needed, its professional experience is not drawn on in strategic matters - while at the same time, SME managers are usually uninformed about the CRM industry and lack proper management qualifications (fig. 23, fig. 24, table 21, table 22, S4)

Finally, based on the expert interviews, the phase model founded on the analysis, the questionnaire analyses and the relations of the path model I created a summary methodology table that contains the tasks arising in the well separable four phases (pre-section, post-section, pre-introduction, post-introduction), the issues that may arise in these at the introducer and the supplier side, as well as the possible solutions to these. (appendix 10)

**Recommendations to the practice**

My research has proven that the introducer side suffers a serious lack of professional expertise. The methodical deficiencies of the supplier side are not helping in the solution of this issue. Furthermore, the supplier side has a superficial knowledge about the motivation and demands of the introducer side; therefore even if they have a methodology it may not put the emphasis on the proper points. As I aimed to map both sides in my research, I formulate my suggestions separately for the supplier and the purchaser side.

R1 As the lack of methodology may cause the majority of the failures, it would be necessary to develop an introduction methodology and general project plan based on the general methodology resulting from the research adjusting it to the software and analyzing the capabilities of the CRM system sold by the supplier, its characteristics, market advantages and special attributes. Using this will improve the success ratio of the introductions.

R2 Due to the insufficient knowledge about purchasers of the supplier market the mapping of the motivation of purchasers seems to be necessary. This requires collating a questionnaire which bases the survey on a uniform basis. Via such a mapping the supplier could make more rational decisions based on the questionnaire, adjusted to the capabilities of the software, emphasizing those advantages of the software that best fit the needs of the purchaser.

R3 Given the insufficient knowledge of the market, the number of interested parties and purchasers will be increased by rethinking the client management strategy, reforming the market communication and putting emphasis on the advantages of the software adjusted to the needs of the purchaser. Almost half of the purchaser gave high value scores to the importance of meetings organized by the suppliers and the opportunity to share experience. Thus such meetings enable the professional support of existing customers, balancing the acquirement of new clients and serving the needs of existing customers to the maximal level.

R4 As the introducer side is not informed properly of the advantages offered by a CRM software, it is worth organizing training sessions, conferences or software fairs where the various suppliers can present themselves and the market. These locations also offer an opportunity for small-scale research which may help the supplier side in the field of development, introduction, marketing and advertisement.
R5 The results of the main component analysis and the cluster analysis have shown that professionals have different attitudes; they consider different areas to be of importance. After the assessment of existing employees it is worth setting up pairs of professionals who can complement each other during the introduction. That way no area will be given excessive weight and all tasks can receive proper attention.

R6 At the purchaser side the choice of the software is in more than half of the cases as a one-man decision. The drawbacks of this have been proven by the results of the research. Setting up a professional team can avoid these drawbacks, the risks of one-man decisions. By analyzing the preferences of the team members it is possible to set up a professional team that is capable of managing an entire introduction process.

R7 The demand for the introduction of a CRM may come from the management but it may come from the employees as well. In both cases, the readiness of the company should be evaluated, whether it is ready to incorporate and operate a client relationship management system from an organizational and IT viewpoint. The introduction of the software is not sufficient and is not even necessary to the operation of a client-focused organization. Therefore it is worth reviewing and rationalizing the operations of the company and the development of a client strategy involving the employees or an external advisor. Only after this it becomes reasonable to examine what demands an IT solutions should fulfill, a solution that can support a well-functioning organization and make it even more effective. In this process, management support is of essential importance because the members of the organization will react to the organizational changes with hostile feelings. The resulting stress may be greatly relieved by proper information provided to the employees and the development of a motivation system. During the introduction, there should be proper emphasis on training and test operation in order to keep employee attitude positive. Attention should be given to the timing and length of these phases, it should not be forgotten that employees are overburdened during the introduction as they have to do the tasks related to the software introduction in addition to their everyday work. The operation of a motivation system can ease employee unhappiness in this phase of the introduction as well. Effective operation requires a clean database; therefore database maintenance is also a continuous task in the life of a company operating a CRM.

Possible ways to continue the research

R8 The results of my research have proven that the supplier market does not have proper information on the demands of the purchaser side. Therefore it would be reasonable to reveal a broader, representative picture on this, considering company size, sector and industry differences as well.

R9 In order to achieve this, performing a country-wide survey would be reasonable, showing the spread of traditional, full-functionality CRM systems within the SME sector.

R10 Based on the representative surveys a more detailed statement list could be developed and tested on a country-wide sample, which would enable the further development of the model and the methodology.

R11 The examination of international experience, with special attention to the situation in Germany, Austria, Sweden and the UK. Adoption of best practices in the Hungarian SME sector. Further building and completion of the model and the methodology.

R12 Testing the practical applicability of my research model on SME actors of various sizes operating in various industries, having different CRM software needs.
7 List of publications

I. Scientific articles

*Articles published in a foreign language*


REICHER REGINA ZS. (2011) IT implementation and agricultural product distributors, XVIII Congress SERIA Wroclaw Poland *The Polish Association of Agricultural and Agribusiness Economists* ISSN 1508-3535 p.: 200-204

*Articles published in Hungarian*

REICHER REGINA ZS. – RÁCZ GEORGINA (2012): A LOHAS témák megjelenése az offline és online magazinokban (Appearance of LOHAS subjects in online and offline newspapers), *Gazdaság és Társadalom* ISSN 0865-7823 2012/3-4 p.: 36-51

KOMÁROMI NÁNDOR – REICHER REGINA ZS. (2013): CRM rendszer bevezetésének és kiválasztásának problémái (Issues of selecting and introducing a CRM system), *Marketing & Menedzsment* – being published

II. Presentations at scientific conferences published in conference materials

*In a foreign language*


*In Hungarian*


REICHER REGINA ZS. (2007): CRM rendszer kiválasztásának és bevezetésének problémái, Tradíció és Innováció (Issues in the selection and introduction of a CRM system, tradition and


III. Scientific publications (books, chapters, teaching materials)