

Market Research Methodologies: Multi-Method and Qualitative Approaches

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A volume in the Advances in Marketing, Customer
Relationship Management, and E-Services
(AMCRMES) Book Series



An Imprint of IGI Global

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Cover Design: Jason Mull

Published in the United States of America by
Business Science Reference (an imprint of IGI Global)
701 E. Chocolate Avenue
Hershey PA, USA 17033
Tel: 717-533-8845
Fax: 717-533-8661
E-mail: cust@igi-global.com
Web site: <http://www.igi-global.com>

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Library of Congress Cataloging-in-Publication Data

Market research methodologies : multi-method and qualitative approaches / Amandeep Takhar-Lail and Ali Ghorbani, editors.

pages cm

Includes bibliographical references and index.

ISBN 978-1-4666-6371-8 (hardcover) -- ISBN 978-1-4666-6372-5 (ebook) -- ISBN 978-1-4666-6374-9 (print & perpetual access) 1. Marketing research--Methodology. 2. Consumers--Research--Methodology. 3. Qualitative research--Methodology. I. Takhar-Lail, Amandeep, 1980- II. Ghorbani, Ali, 1984-

HF5415.2.M346 2015
658.8'3--dc23

2014021024

This book is published in the IGI Global book series Advances in Marketing, Customer Relationship Management, and E-Services (AMCRMES) (ISSN: 2327-5502; eISSN: 2327-5529)

British Cataloguing in Publication Data

A Cataloguing in Publication record for this book is available from the British Library.

All work contributed to this book is new, previously-unpublished material. The views expressed in this book are those of the authors, but not necessarily of the publisher.

For electronic access to this publication, please contact: eresources@igi-global.com.

Chapter 12

Multi-Method Analysis

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ABSTRACT

Multi-Method Analysis (MMA) can be understood as an interdisciplinary approach to the triangulation of research results or deepening of knowledge gained as a result of classical hypotheses testing by means of statistical analysis. In this case, the synergy effect obtained by using MMA as a combination of the quantitative (survey research) and qualitative (In-Depth Interviews – IDI) analysis is presented. To achieve the empirical bases of the study, a theoretical model is used as a marketing management example. The model refers to firm performance as a result of customer lifetime value management. The essence of the case study is to present the whole research to illustrate the researcher’s way of thinking from conceptual model development through quantitative hypothesis testing and qualitative explanation. The research was conducted from 2012 – 2013 in the insurance industry in Poland.

INTRODUCTION

The purpose of this chapter is to present the application of Multi-Method Analysis (MMA) as an approach to the deepening of knowledge gained as a result of classical hypotheses testing by means of statistical analysis in the field of marketing management. In this case, the essence is to show the synergy effect by combining the quantitative and qualitative analysis. By using a quantitative approach it is possible to verify statistical hypotheses and to make generalizations at least at the sample level. The use of a qualitative approach allows the interpretation and explanation of the results. The added value of this method is the identification, why the quantitative results are what they are. Therefore, the explanation is not only based on

logical or theoretical justification, like in case of most of the publications in marketing management, but based on empirical data obtained in a single project with consistent assumptions. The purpose is to clarify the results of one research by the results of another, which allows a precise explanation of the shape, direction and strength of the statistical relationships by identifying factors, that have been unidentified in the quantitative research. In this chapter, the benefits of using MMA has been presented in the form of a case study. Empirical basis is the *customer lifetime value management and economic performance of the company for example of the insurance industry* research, conducted in 2012 - 2013 in the insurance industry in Poland.

DOI: 10.4018/978-1-4666-6371-8.ch012

BACKGROUND

Multi-Method Analysis (MMA or Mixed-Method Research - MMR) is an interdisciplinary research approach, the essence of which is a combination of different quantitative and qualitative research methods to authenticate (triangulation), or in-depth interpretation and explanation research results (Di Staso, Bortree, 2012; Klassen, Creswell, Clark, Smith, Meissner, 2012, Heyvaert, Maes, Onghena, 2013). Due to the diversity of the presented methods, it is rather the research approach than a research method. Its application allows to find a compromise between naturalism and anti-naturalism (Zachariadis, Scott, Barrett, 2013), what in practice can rely on the identification of statistical relationships determinants (the naturalistic aspect) and an explanation of their nature and causes (anti-naturalistic aspect) (Zachariadis, Scott, Barrett, 2013). This allows for the enrichment of the statistical results with additional knowledge to find explanations (Layder 1990; Sayer 2000) and to identify new areas of research within the analyzed field.

To enable understanding the nature of MMA, the complex case study has been presented. This case study seeks to investigate the efficiency of customer lifetime value management exemplified by the insurance industry in Poland. The essence of the case study is to present the results of the whole research to illustrate the researcher's way of thinking from conceptual model development, through quantitative hypothesis testing to qualitative explanation.

MAIN FOCUS

Customer lifetime value (CLV) is the sum of discounted cash flows generated by a single customer or a customer segment, during the entire period of the cooperation with the company (Villanueva, Hanssens, 2007; Pfeifer, 2005; Kumar, Ramani, Bohling, 2004). Since this value can be managed

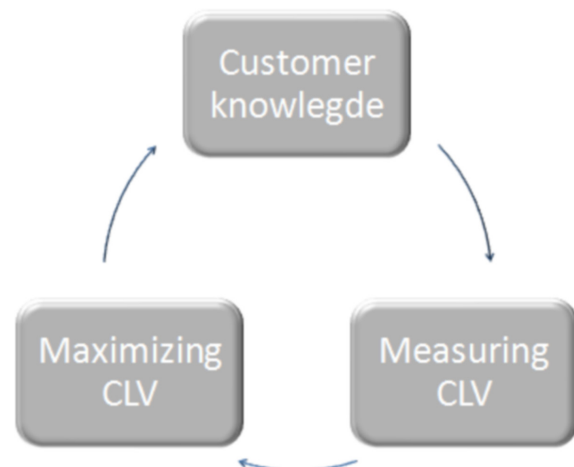
(Blattberg, Getz, Thomas, 2001; Kumar, George, 2007), the customer lifetime value management (CLV management) is a combination of activities that rely on measuring and maximizing this value, based on customer knowledge (Kumar, Venkatesan, Beckmann, 2009; Kumar V, Ramani, Bohling, 2004). The sequence of CLV management activities are characterized circular. Its simplified model is presented on Figure 1.

The starting point for CLV management is the customer knowledge. Measuring and maximizing are the next steps, because it is impossible to maximize the value of an asset, that has not been measured before. Customer knowledge is an element that can be used in both areas. There are feedback loops in model for each sequence, and the cycle repeats. The way of measuring CLV determines the type, quantity and quality of customer knowledge, and the course of action to maximize CLV provides new knowledge, which is used again for its measuring and maximizing and then the cycle repeats.

The sequence of actions in which measuring and maximizing CLV are executed, can be represented by the customer life cycle (Blattberg, Getz, Thomas, 2001; Kumar, 2008), which consists

Figure 1. CLV management cycle: a simplified model

Source: author's own



of two elements associated with the customer analysis (customer knowledge creation and CLV measurement) and four items related to CLV maximization (customer acquisition management, customer retention management, customer relationship development and customer attrition management) (Figure 2).

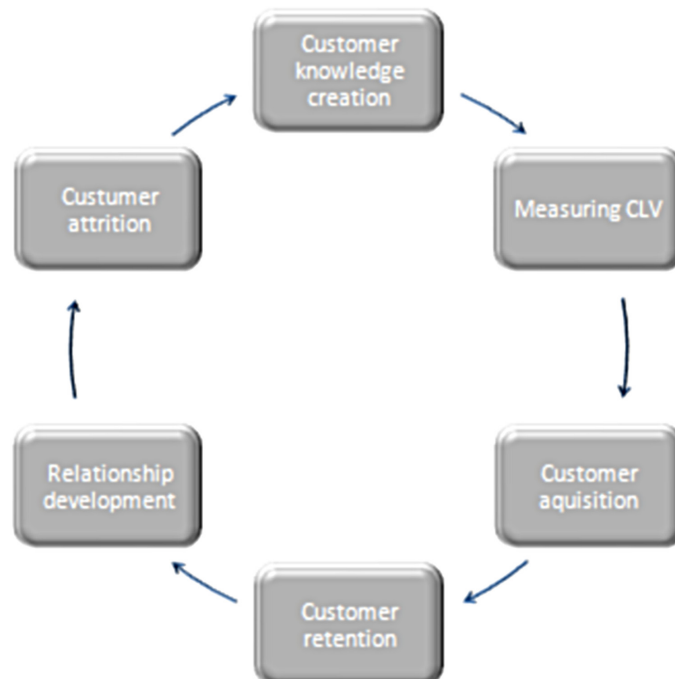
Customer knowledge creation is a key element in the process of CLV management. Its essence is the accumulation of knowledge in a planned, organized and structured way. Measuring CLV is the present value estimation of future net benefits to be paid to the company by customers as the result of relationship. Customer acquiring are the general activities of the company, aimed to make a transaction with customers, as optimal from the perspective of building the long-term and profitable relationships with them Customer retention management is usually the company's activities leading to the customer's next purchase at a certain time. Customer relationship develop-

ment activities are generally intended to increase the value of the customer through add-selling related activities. Customer attrition management are all activities related with valuable customers retention conditions realized with increasing their value (own definitions based on: Blattberg, Getz, Thomas, 2001; Kean, Wang, 1995; Kumar, 2006; Kumar, 2008; Kumar, Reinartz, 2006; Villanueva, Hanssens, 2007).

The activities described above are carried out in the course of business and have an economic dimension. Thus, the composition of economic activities can be assessed in terms of their efficiency, regarded as firm (business) performance and measured by financial metrics (Jaworski, Kohli, 1993; Kohli, Jaworski, 1990; Kumar, Ramani, 2008; Narver, Slater, 1990; Narver, Slater, 2000). This relationship can be presented as a conceptual model with six hypotheses constructed (Figure 3).

In order to operationalize the firm performance, customer profitability, customer lifetime value,

Figure 2. CLV management cycle: a developed model
 Source: author's own



Multi-Method Analysis

net sales income and net profit/loss has been used (Tomczyk P, 2012). The survey was conducted from August till September 2012 and was attended by 1,245 insurance agents from Poland, regarded as micro-enterprises. The hypotheses verification procedure was based on the respondents declarations which have been measured on a Likert scale (from 1 to 5). The procedure of data analysis was consisted of *r-Pearson's* latent variables correlation, which are separated by means of factor analysis in an exploratory scenario. The results are presented in Table 2.

All hypotheses verification is positive, but the intensity of the relationship measured by the *r-Pearson's* correlation coefficient is poor (H.3-

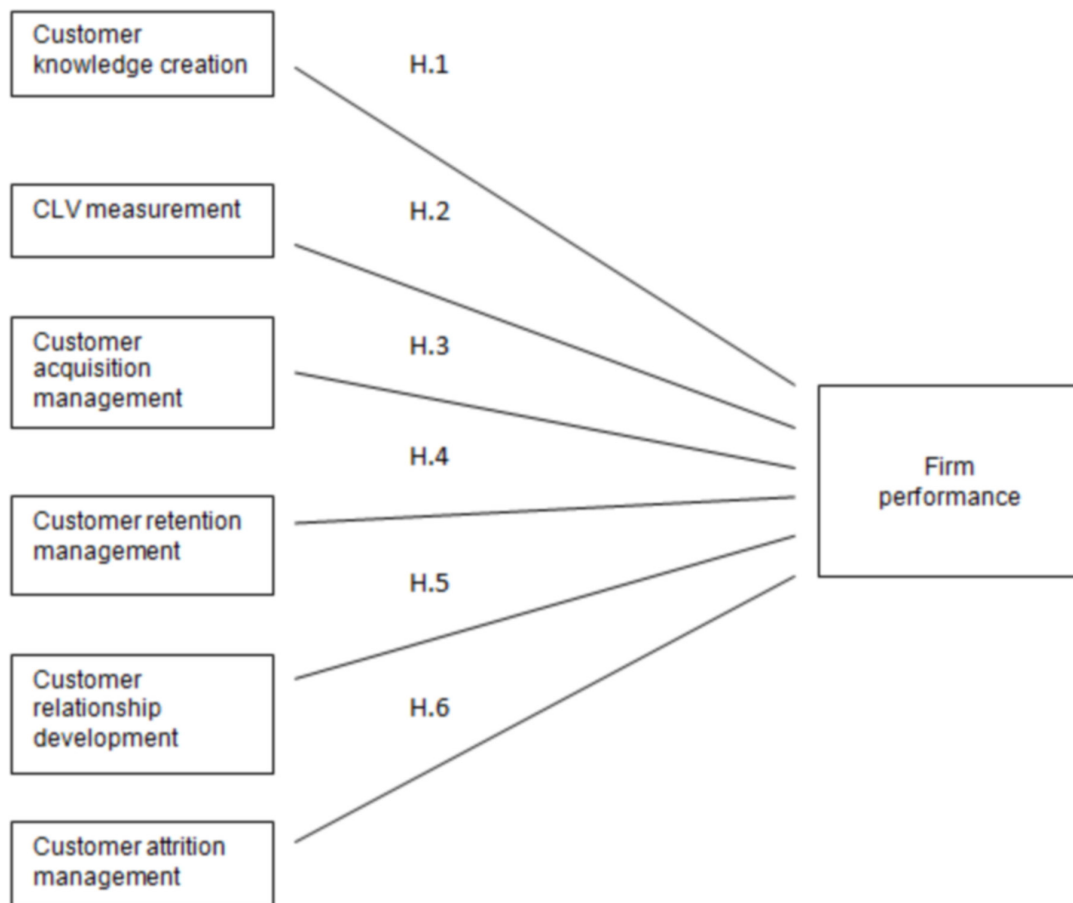
6), rather poor (H.2) or rather moderate (H.1), which does not allow to identify the linear-shaped relationship, although the relationship is positive. When the correlations are statistically significant, it is possible to model the relationship. For this purpose, a multiple regression analysis was performed (Table 2, 3).

R-square is 0.111, indicating poor fit to the model. Predictors included explained 11% of firm performance and the only variable associated with firm performance is customer knowledge creation (CKC).

And here is a question of the results explanation. To explain the identified relationships and discover the factors responsible for their particular shape,

Figure 3. CLV management and firm performance: a conceptual model

Source: author's own



direction and strength, the qualitative analysis based on the methodology proposed by S. Kvale (1996; 2007) has been conducted. Data analysis has been performed using the method described by G. Gibbs (2007) .

A qualitative study was conducted from June to September 2013 and was attended by 10 insurance agents from Poland. The method of data collection was individual in-depth interview (IDI), and the method of data analysis was an analysis of meanings based on subject categories extracted from the full text transcription. In order to obtain maximum precision of the conclusions, the analysis was conducted separately for each of the analyzed statistical hypotheses.

Table 1. Hypotheses

H1: The higher the level of activities in the field of customer knowledge creation, the higher a firm performance.
H2: The higher the level of activities in the field of customer lifetime value measurement, the higher a firm performance.
H3: The higher the level of activities in the field of customer acquisition management, the higher a firm performance.
H4: The higher the level of activities in the field of customer retention management, the higher a firm performance.
H5: The higher the level of activities in the field of customer relationship development, the higher a firm performance.
H6: The higher the level of activities in the field of customer attrition management, the higher a firm performance.

Source: Author's own

Table 2. Table of correlations

	Variable	r-Pearson	p-value<	n ¹
H. 1	Customer knowledge creation	0.326	0.001	451
H. 2	CLV measurement	0.241	0.001	451
H. 3	Customer acquisition management	0.178	0.001	451
H. 4	Customer retention management	0.177	0.001	451
H. 5	Customer relationship development	0.173	0.001	451
H. 6.	Customer attrition management	0.170	0.001	451

Source: Author's own

H1: The Higher The Level of Activities in the Field of Customer Knowledge Creation, The Higher a Firm Performance

Distribution characteristics of 'customer knowledge creation' is close to normal (skewness=0.069, Std. Error =0.069), and the arithmetic mean of the aggregated variable(2.96) indicates that the activities carried out in this area aren't common ones. As can be seen in the table 2, the level of co-existence between 'customer knowledge creation' and 'firm performance' estimated is positive($r = 0.326$, $p < 0.001$, $n = 451$), and can be considered rather moderate. The correlation's shape, strength and direction indicates that the customer knowledge creation has a moderate importance to firm performance.

The results of qualitative study (Tomczyk, 2013) is, that customer knowledge creation is required to build any relationship between supplier and customer. However, the tendency to create such relationship in a formalized way is a unique feature among agents and those who possess this characteristics to a greater extent than others, achieve slightly better business performance than those who don't. Despite the fact that knowledge is accumulated intuitively and informally, it is a key efficiency factor of CLV management. The relatively low correlation coefficient is the effect of firm's non-strategic approach to the business. Focus on customer portfolio building is taken without regard to its profitability and does not require advanced activities.

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Table 3. Model summary

Model	R	R-Square	Adjusted R-Squared	The Standard Error of the Estimate
1	.333 ^a	.111	.099	.94940303
Predictors: <ul style="list-style-type: none"> • Customer knowledge creation (CKC). • CLV measurement (CLVM). • Customer acquisition management (CAM). • Customer retention management (CRM). • Customer relationship development (CRD). • Customer attrition management (CAAttM). Dependent variable: <ul style="list-style-type: none"> • Firm performance. 				

Source: Author's own

Table 4. Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-.031	.045		-.673	.501
CKC	.320	.073	.310	4.373	.000
CLVM	-.013	.069	-.013	-.190	.850
CAM	.051	.057	.051	.889	.374
CRM	-.008	.064	-.008	-.121	.904
CRD	.053	.058	.056	.913	.361
CAAttM	-.029	.059	-.029	-.486	.627

a. Dependent variable: firm performance

Source: Author's own

H2: The Higher The Level of Activities in the Field of Customer Lifetime Value Measurement, The Higher a Firm Performance

Distribution characteristics of 'customer lifetime value measurement' is close to normal (skewness = -0.026, Std. Error = 0.069), and the arithmetic mean of the aggregated variable (2.86) indicates that the activities carried out in this area aren't common ones. As can be seen in the Table 2, the level of co-existence between CLV measurement and firm performance, estimated using *r-Pearson's* correlation coefficient is positive ($r = 0.241, p < 0.001, n = 451$), and can be considered

rather poor. The correlation's shape, strength and direction indicates, that the CLV measurement has rather poor importance to firm performance.

As a result of qualitative study (Tomczyk, 2013) it was found that CLV measurement is a secondary category to the customer knowledge creation. Just as in the customer knowledge creation, so here the informal and intuitive approach dominates. Financial performance, such as costs and revenues from a single customer are not subject to analysis. They are replaced by the analysis at the level of the entire customer portfolio because this category is directly connected with earnings. Individual analysis is performed for non-financial benefits, such as recommendations and branding

benefits. These activities are still being intuitive and informal, but are being used in practice. Since the statistical relationship in this area is not strong, it is considered that the formalization of activities in this area is not necessary for achieving growth in the area of firm performance. Even firms, who do them, are not able to list benefits they bring.

H3: The Higher The Level of Activities in the Field of Customer Acquisition Management, The Higher a Firm Performance

Distribution characteristics of 'customer acquisition management' is asymmetric, left skewed (skewness= - 0.468, Std. Error 0.069), and the arithmetic mean of the aggregated variable(3.55) indicates that the activities carried out in this area are quite common. As can be seen in the Table 2, the level of co-existence between customer acquisition management and firm performance, estimated by using *r-Pearson's* correlation coefficient is positive($r=0.183, p<0.001, n=451$), and can be considered poor. The correlation's shape, strength and direction indicates that the customer acquisition management has a little importance to firm performance.

By the results of qualitative study (Tomczyk, 2013), it was found that the activities declared in the customer acquisition management are typical because of their commonness. In this situation, the reason for such a poor relationship with firm performance should be discovered. It is necessary to identify the nature of the activities carried out in this area. It was found that all the activities are about collecting information about customers and building a relationship with them, and the relationship has not to be profitable, but almost always cordial. Insurance profession is not respected by society, and associated with behavior that does not allow for effective information retrieval and for building relationships based on affection. Agents are seen as pushy sellers, seeking to maximize their own benefits through the use of

information asymmetry that exists between them and the potential customer. This reputation do not conduce efficient acquisition of information from the customer and relationships based on affection. There are formalization directives formulated by insurance companies of the first contact with the customer, but their efficiency is poor.

Agents seek to give the first and other contacts with potential customer the most informal character. Casual atmosphere of the meeting usually conduces to obtain important information. Thus, agents try to obtain information before first meeting and after it, but they do it intuitively and, as a rule, in a non-formal way. Therefore, there is a wide variety of activities related to the customer acquisition but they are very common and, as such, does not contribute to the creation of competitive advantage, but they are the cost of competition. The omission effect is therefore considerable, but it is rather reflected in customer portfolio attrition than a direct firm performance worsening. It should be noted that at the stage of customer acquisition, it is rational to focus more on the customer portfolio building than on the firm performance, measured by financial metrics.

Not all activities occurring at this stage are common. Additionally, some of them are inconsistent with the principle priority of customer portfolio building. Determining the likelihood of acquisition or estimating the relationship duration, in this context is not important. The segmentation based by profiling, determining the probability of customer acquisition or estimating the relationship duration is not formalized too, although their analytical nature shows less diversity than in the case of activities related to the customer knowledge creation. It must be concluded that towards unpredictability of the consumer behavior resulting from agent's lack of knowledge about them, analytical activities may not translate directly to the firm performance. It is worth to notice that the agents themselves do not see a direct link between activities on this area and their performance. These are routine activities, which are rather the

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cost of competition, which does not constitute a competitive advantage. It follows that the firm performance at this stage are either extremely difficult to quantify, as well as remote from the activities concerned.

H4: The Higher The Level of Activities in the Field of Customer Retention Management, The Higher a Firm Performance

Distribution characteristics of 'customer retention management' is asymmetric, left skewed (skewness= -1.019, Std. Error 0.069), and the arithmetic mean of the aggregated variable(4.00) indicates that the activities carried out in this are very common. As can be seen in the Table 2, the level of co-existence between customer retention management and firm performance estimated by using *r-Pearson's* correlation coefficient is positive ($r = 0.177$, $p < 0.001$, $n = 451$), and can be considered poor. The correlation's shape, strength and direction indicate that the customer retention management has a little importance to firm performance. Activities declared under customer retention management are more common than those occurring in the area of customer acquisition management. This is indicated by both the distribution of the answers given in the index 'customer retention management' and the nature of the comments appearing in in-depth interviews.

As a result of qualitative research (Tomczyk, 2013), it was found that the activities at this stage are intuitive and based on relationships that are not verified for profitability. In fact, activities in this area are focused on integrity of customer portfolio. This is done through identifying changes in customer's needs and reducing customer's costs. A key way to maintain the integrity of the portfolio is a high level of product penetration and building a relationship based on goodwill and trust. A proposal of additional purchase which is tactfully

presented should not be cause a negative reaction of the customer, especially in a situation where the relationship is already built and when customer's confidence is present. At this stage, it should be noted that the statements of the respondents are contrary to the guiding principle of the insurance agent's business - the construction of customer portfolio. Retaining customers by increasing product penetration level has all the characteristics of efficiency and it should be strongly linked to the firm performance. But it is not. It should be noted, that communication insurances (f.e. Auto Casco) are sold in this way, because they are easy to cross-sell in a package with liability insurance. Moreover, respondent's declarations are dominated by soft incentives – agents 'advise', 'propose', 'recall'. There is no reason to believe that these proposals result with something more than selling communications insurance.

Likelihood assessment of retention practically doesn't exists, which is consistent with the principle of customer portfolio building and agent's tendency to serve every customer. It can be concluded that the key determinant of action at this stage is fear of losing customers.

Despite the dominance of activities at building relationships based on loyalty, a key benefit of the customer relationship is the level of contributions paid and the propensity to recommend. Quality of relationships is emphasized in the definition of key customers. From an economic perspective, a key customer is valuable because conduces to generating recommendations and over standardized financial contribution.

Strong emphasis on customer portfolio building results in little emphasis on firm performance measured by financial metrics. Financial dimension activates are random because of agent's fear of customer discouragement. As a result, actions in this area are used too soft to have an impact on firm performance. Their nature is not clear, and the omission effect - ambiguous.

H5: The Higher the Level of Activities in the Field of Customer Relationship Development, The Higher a Firm Performance

Distribution characteristics of 'customer relationship development' is asymmetric, left skewed (skewness= -1.675, Std. Error 0.069), and the arithmetic mean of the aggregated variable(3.97) indicates that the activities carried out in this area are very common. As can be seen in the Table 2, the level of co-existence between customer retention management and firm performance estimated by using *r-Pearson's* correlation coefficient is positive ($r=0.173$, $p<0.001$, $n=451$), and can be considered poor. The correlation's shape, strength and direction indicates, that the customer retention management has a little importance to firm performance.

The level of activities declared under customer relationship development are similar to the level of activities occurring in the area of customer retention management. This is indicated by both the distribution of the answers given in the index 'customer relationship development' and the nature of comments appearing in in-depth interviews. Distribution of the variable indicates a very high level of its conventionality, but their relationship with firm performance is poor.

As a result of qualitative research (Tomczyk, 2013), it was found that agents don't define and don't measure the efficiency of activities at this stage. Add-selling activities are concerning soft proposals which are not supported by customer benefits resulting from purchases combined.

Customer education, which is the part of customer relationship development is 'technical' and it is realized by giving information about the basic offer principles, key condition of the contract and phone numbers. Education impact factor on the value of sales in the short term is small, but it allows strengthening of the relationship with the customer, which may have a positive impact on the firm performance in the long run.

Special arrangements for key customers are realized for building a stable customer portfolio and they are not conducive to maximizing the added value of customer relationships. Declaration about keeping in touch with customers gives an interpretation problem. It is difficult to determine, whether the customer is valuable due to the contact with the agent or the contact is determined by customer's value. Action planning is only for the duration of the contract, even though the actions are taken also beyond that time. Modification of agent's professional habits based on customers information does not exist and the offer is usually sold in accordance with the needs of the customer, due to the negative financial consequences for the agent in the case of payment cessation of contributions by the customer.

In consequence, the efficiency of activities is not important at this stage. The key issue is to focus on reputation and stable customer portfolio maintaining. It is still important to handle each customer, which is characterized by a certain level of good manners and not willing to consciously generate a basis for payment. Therefore, a key omission effect is weakened customer relationships and, consequently, its loss and erosion of the portfolio. The Activities in this field are rather the competitive costs than a factor of competitive advantage.

H6: The Higher the Level of Activities in the Field of Customer Attrition Management, The Higher a Firm Performance

Distribution characteristics of 'customer attrition management' is asymmetric, left skewed (skewness= -0.646, Std. Error 0.069), and the arithmetic mean of the aggregated variable(3.73) indicates that the activities carried out in this area are common. As can be seen in the Table 2, the level of co-existence between customer attrition management and firm performance estimated by using *r-Pearson's* correlation coefficient is

Multi-Method Analysis

positive ($r=0.170, p<0.001, n=451$), what can be considered poor. The correlation's shape, strength and direction indicates, that the customer attrition management has a little importance to firm performance.

As a result of a qualitative study (Tomczyk, 2013), it was found that the conversations with customers about their dissatisfaction and determining, which customer wants to leave, are derivatives of the quality of the relationship. However, it is difficult to induce the customer to change the decision to leave. Key customers who want to leave are often encouraged by the customized financial propositions, which can be effective in regard to price and other offer conditions.

Registers of former customers are carried out both by the insurance companies (often) or by agents (rarely). However, the impact of this action on the firm performance is very limited due to their usefulness rather after decision to return than during its making .

Contact with key customers is either a derivative of the quality of relationships with them and its effect is, that some of them are back. It should be noted that it is easier to get the key customer back than to dissuade him from leaving his own decision.

Custom offers are not being proposed after customers return. When they are back, they are just redundant cost of agent's activities. Identification of causes of customer leaving is made explicitly or clear from the context, assuming the existence of a good relationship. In other way, they are very difficult to determine. The main causes of customer portfolio erosion are high prices, failure of communication and the lack of effective claims adjustment. In this area, the primary omission effect is the erosion of customer portfolio. Its direct impact on the financial result is much smaller and is manifested by the loss of key customers.

SOLUTIONS AND RECOMMENDATIONS

The level of statistical relationships between CLV management and firm performance in any of the six areas is not high. As a result of qualitative research, seven key factors affecting the situation has been identified. These factors are: priority of customer portfolio building, the poor relationship between the level of formality and the firm performance, efficiency analysis for customer portfolio as a whole, the perceived unpredictability of customer behavior, activities as the cost of competition, not competitive advantage, soft character of add-selling and the importance of customer's good manner. Given the prevalence of these characteristics, the omission effect in the field of CLV management is in natural way not linked to the firm performance. This discovery would not be possible only by analyzing the results of a quantitative or qualitative study separately. Discovered factors undermine the importance of financial performance orientation to orientation simply based on customer portfolio building, which is measured by the number of customers without reference to their profitability. It reduces the efficiency of CLV management as a composition of individual customer-oriented activities. Identification and characterization of these factors, have been possible by using MMA approach. Based on double-research approach, the synergy effect was achieved. Its essence was to identify factors that determine the shape, strength and direction of the statistical relationships.

FUTURE RESEARCH DIRECTIONS

MMA approach is recommend to researchers who are interested in embedding the results of quantitative research in context, the identification of the causes and circumstances taking affect on

statistical analysis results and the identification of new research areas. Each of these areas has a potential contribution to building new hypotheses and theory development within its specific field of science.

CONCLUSION

The purpose of this chapter was to present the application of Multi-Method Analysis (MMA) as an approach to the deepening of knowledge gained as a result of classical hypotheses testing by means of statistical analysis in the field of

marketing management. The presented study was an example illustrating its applicability. MMA allows the identification of the factors omitted in the quantitative research and not possible to identify in a different way. In consequence, it allows the identification of the causes and circumstances taking affect on statistical analysis results. In effect of similar research conditions (here: one industry) it was possible to minimize the risk of incorrect generalization, which may happen in the case of explaining the results of quantitative research only by reference to formal logic or theory. Therefore MMA approach is highly recommended as a means to deepening the statistical results in a correct way.

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KEY TERMS AND DEFINITIONS

Customer: Person or organization that purchases a product or service.

Customer Relationships: Here, relationships between the customer and the company, based on the mutual exchange of values.

Customer Lifetime Value (CLV): The sum of discounted cash flows generated by a single customer or customer segment, during the entire period of cooperation with the company.

Customer Lifetime Value Management (CLV Management): A combination of activities that rely on measuring and maximizing this value realized based on customer knowledge.

Multi-Method Analysis (MMA): An approach to the triangulation the research results or deepening of knowledge gained as a result of classical hypotheses testing by means of statistical analysis.

Qualitative Research Definition: A set of methods, that can be use to in-depth understanding and the reasons of identified relationships.

Quantitative Research Definition: Systematic empirical investigation of specified phenomena via statistical, mathematical or computational techniques.

ENDNOTES

- ¹ Number 451 represents the respondents, who referred to the points on their firm performance.