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## Customer Analysis and Firm Performance in the Polish Insurance Market. Perspective of Customer Profitability and Lifetime Value

### Summary

The paper attempts to answer the research question whether conducting customer analysis improves firm performance. It presents results of research among Polish insurance agents. According to its findings, conducting customer analysis is positively correlated with firm performance. Other factors that determine firm performance to a large extent are related to economies of scale and established competitive position (i.e. co-workers, low perception of risk related to other channels, agents' reputation). The use of dedicated CRM software does not influence firm performance. The research results are discussed with the perspective of customer profitability and customer lifetime value.

**Key words:** customer analysis, customer profitability, customer lifetime value, firm performance, reputation, insurance, CEE, Poland.

**JEL codes:** M3

### Introduction

With the transition to modern economy, customers started being perceived as company's assets. The concept of customers as the company's equity was described by Blattberg et al. (2001). The authors introduced a strategy of customer equity management through new customer acquisition, customer retention, and add-on selling. Perception of customers as a part of the company's assets is the keynote of the book *Managing Customers as Investment* written by S. Gupta and D.L. Lehmann (2005). The authors admit that customer value directly impacts company value and show that the organisation of processes in a company should be submitted to customer value management. In *Return on Customers*, Peppers and Rogers (2011) also point out that a long-term customer equity is the most valuable company asset.

The focal role of customers in company's operation is the premise of the concept called customer value management. It is defined as managerial approach, according to which customers are perceived as the company's asset, the value of which may be measured and increased through organisation of the processes around customer relationships (Doligalski 2015). A special role in customer value management is played by the measurement of met-

rics associated with customers, such as customer profitability and customer lifetime value (Dobiegała-Korona 2011; Gupta & Lehmann 2003; Tomczyk 2012). Their knowledge allows customer portfolio segmentation and thus actions aimed at increasing the value of customer segments (e.g. customers of highest profitability, customers of negative profitability). Value of customer portfolio is also an important indicator as it may be the basis for company's valuation (Gupta & Lehman 2002).

Although customer value management was the subject of comprehensive studies (e.g. Dobiegała-Korona, Doligalski 2011), the question of its effectiveness still remains unanswered. This study attempts to fill this gap by identifying the relationship between conducting customer analysis and firm performance with reference to the concept of customer lifetime value.<sup>1</sup> Customer analysis is understood as activities including customer knowledge management and measurement of customer metrics. The empirical data were gathered 2012 among Polish insurance agents. In this sector, customer service and direct long-term relationships with customers are perceived as key factors in competition (Tomczyk 2013; 2014).

### Measurement of Customer Profitability and Customer Lifetime Value

Customer profitability is the difference between the gross margin and customer costs (the margin on customer, so to speak) (Rybarczyk 2011, p. 555). In other words, it is the net value of benefits generated for the company by the customer in the past (Tomczyk 2012).

The literature provides several approaches to the measurement of customer lifetime value. The differences between these approaches lie in the level at which the measurement is made (individual customer vs customer portfolio)<sup>2</sup> and types of value stream taken into account by the formula<sup>3</sup>. For the purpose of simplification, these numerous approaches can be replaced with a universal formula, based on net present value (NPV). The mathematical formula (1) that uses this concept is presented below (Doligalski 2009, p. 78):

$$CLV = NCF_1 + \frac{NCF_2}{1+i} + \frac{NCF_3}{(1+i)^2} + \frac{NCF_4}{(1+i)^3} + \dots + \frac{NCF_n}{(1+i)^n} \quad (1)$$

where: NCF – net cash flows; i – discount rate; n – number of periods during which the customer is projected to buy company's products.

<sup>1</sup> This is a revised and extended version of the paper *Customer Analysis: Does It Help to Improve Firm Performance? Research Results from Polish Insurance Market* originally presented at the 5th Regional Conference of European Marketing Association in Katowice, September 2014. The article has been augmented by adding the perspective of customer profitability and lifetime value in the literature review and in the discussion. Based on the same data set we also published an article in the "Journal of Business Research" (Tomczyk et al. 2016), where we researched the relationship between customer analysis and financial performance with a more sophisticated model including structural equations.

<sup>2</sup> Bottom-up and top-down approach – cf. V. Kumar (2010, p. 18-21).

<sup>3</sup> From simple models which take into account only cash flows – cf. Gupta & Lehmann (2003) – to complex ones which take into account non-cash flows, too – cf. Bauer, Hammerschmidt, Braehler (2003) and Bauer & Hammerschmidt (2005).

Net benefits resulting from the relationship with a customer to which one can assign a monetary value are composed of revenues plus non-monetary benefits (image, information, recommendations) generated by the customer less customer cost, such as the expenses for acquiring and keeping them (Doligalski 2010).

The term which is not discounted, i.e. (designates in the literature the difference between the revenues and the costs of acquisition of the customer in the first period. Net cash flows related to a customer consist of cash inflows (CFI) generated by this customer and cash outflows related to the service, such as expenses for acquiring and keeping the customer (Doligalski 2006, p. 434).

The difference between these two values is presented in formula 2:

$$\text{NCF} = \text{CFI} - \text{CFO} \quad (2)$$

where: CFO – cash outflows; CFI – cash inflows

Of particular note is the fact that mathematically speaking the presented formula of customer lifetime value measurement can be applied to measure both the value of a single customer as the value of a customer portfolio.

The universal formula for calculating customer value presented above is similar to the net present value formula, which is used to assess the profitability of an investment (Roemer 2007, p. 441). The possibility to use the NPV metric in estimating value of customer relationships dates back to 1966, when E. C. Bursk wrote about it in his paper entitled *View Your Customers as Investments* (After Ahmadi, Taherdoost, Fakhravar, Jalaliyoon 2011, p. 309). The NPV formula includes the sum of net profits – represented by the net cash flow (NCF) – generated by an investment in its whole lifetime discounted at the discount rate. There are two general discount rate types – free-of-risk and risk-adjusted. In the first case, discount rate plays a role similar as in case of net present value – it adjusts the future income based on the declining value of money over time (Doligalski 2015, p. 145) and doesn't cover risks associated with customer service. In the second one it reflects customer relationship risks. When the risk reflects the present, general firm's risk, it expresses in WACC formula which combines costs of different type of capital engaged. When the risk is above-average, it includes an additional risk premium (Rogowski 2008, p. 276). The above is illustrated by formula 3:

$$\text{NPV} = \sum_{t=0}^n \frac{\text{NCF}_t}{(1+k)^t} \quad (3)$$

where: – net profit in pecuniary value; k – discount rate; t – lifetime of the project/investment.

The customer value metric constitutes a special case of application of NPV (Doligalski 2010). If the NPV metric is used to measure customer value, the data used should be related to the investment in the customer/customer portfolio (Roemer 2007, p. 441). Depending on the approach, these might be cash flows only (cost of acquisition, cost of service, cost of terminating the relation and sales revenues) (Blattberg, Getz, Thomas, 2001), but also non-cash flows (value of recommendations, other information, and image-related benefits) (Bauer, Hammerschmidt, Braehler 2003). The outcome of the measurement is the customer value resulting from the flows which were taken into account, calculated for a given period. This value can be used to segment customers and establish cooperation with those whose value meets the criteria defined by the company.

Customer metrics are essential for gathering information and transforming it into knowledge on customer (Sobolewska 2010), which is needed in the process of customer value management. The latter may be described as a managerial approach, in which customers are perceived as the company's asset, the value of which may be measured and increased through organization of the processes around customer relationships (Doligalski 2015).

The adopted formula of customer value measurement determines what kind of information about the customer is necessary. The knowledge of the customer involves an in-depth understanding of the customers and of the markets which stems from marketing information and which provides a basis for creating value to customer and building a relation with them (Armstrong, Kotler 2012, p. 168). The minimum information necessary for measuring customer value concerns cash flows. However, if formulas taking into account non-cash flows are to be used, relevant knowledge is necessary. So, acquiring knowledge about the customer consists in collecting information about cash flows (cost of acquisition, service and termination of a relationship and sales revenues) and non-cash flows (information about preferences, behaviour and recommendations of the customer/customer portfolio). Moreover, all this knowledge should be acquired in a planned and formalized way (Sobolewska 2010).

## Research Methodology

One of the key issues discussed in this article is the choice of a particular industry as an object of study. Many authors in their research demonstrated a link between the marketing composition and economic performance of the company (Jaworski, Kohli 1990; Jaworski, Kohli 1993; Narver, Slater 1990; Narver, Slater 2000; Akroush, Dahiyat, Gharaibeh, Abu-Lail 2011; Morgan, Vorhies, Mason 2009; Ramani, Kumar 2008; Ismail, Alsadi 2010). That research was conducted mainly on samples of companies from publicly available lists (such as Fortune 500) or among companies associated in business organisations (such as *American Marketing Association-AMA*) or on a sample chosen according to other criteria (for instance managers present at a given meeting or managers dealing with a given area). Few studies are concerned with one or two industries only (Cf for instance: Akroush, Dahiyat, Gharaibeh, Abu-Lail 2011; Stopler, Blut, Holzmueller 2009; Bruhn, Georgi, Handwich 2008). And yet, doing research in a single industry offers many advantages for the researcher. This type of

study is more thorough, since it takes into account the specific context of the industry, which is impossible if different industries are analyzed at the same time. It allows for a better control of variables that are not taken into account in hypotheses but which can affect the outcome of the study (mediating variables). It also allows for an efficient reduction of their number. It is also relatively easier to generalize or replicate the study if need be. In order to be able to carry out a viable study with the purpose of proving the hypothesis, the analyzed companies need to operate in external conditions which are as similar as possible. And there are higher chances of that if the study is conducted within one industry. The industry in which insurance agents operate meets the conditions which are key for the success of the conducted qualitative and quantitative studies. It is relatively large (as of 31 December 2012 34,300 agents and 152,200 people acting as agents were registered in Poland<sup>4</sup>), so it is possible to conduct a statistical analysis.

Moreover, there is a number of institutions that can provide information relevant for the analysis of this industry, namely the Polish Financial Supervision Authority, Polish Insurance Association, Polish Association of Financial Intermediaries and the Polish Chamber of Insurance and Finance Intermediaries. The study did not take into account insurance brokers due to their consulting character in the light of the Polish law<sup>5</sup> and the fact that they represent the customer's and not the insurer's interests. These factors may result in different marketing activities, so if both groups were analyzed jointly it would probably lead to false conclusions. The choice of the insurance industry was also motivated by the scope of the studied area. Exploratory studies suggest that agents and natural persons that act as agents obtain key information regarding the customers and optimize costs related to customer service. The reason behind it is strong competition between agents and the specific nature of their cooperation with insurance companies. There is an external pressure on carrying out appropriate actions aimed at building long-term relations with customers on this market, which enhances the possibilities of research. The said pressure is also driven by the nature of the offered services which, to a large extent, are based on fixed-term contracts and the need to follow precise sales schedules.

Based on the qualitative exploration research (Individual Depth Interviews – IDIs), conducted between May and July 2012 on the sample of 8 micro-enterprises (purposive sampling), operating on insurance market in Poland (insurance agents), 14 features, linked to the firm performance, have been identified. It has been done on the base of respondents' direct declarations and in-context interviews interpretation (Tomczyk 2014). To verify their relationship with the firm performance, between September and October 2012 a questionnaire survey has been conducted. The sample of the survey was 1,245 insurance agents from Poland. There were 275 questionnaires qualified for analysis. The criterion was the answer on every question, related to features identified in qualitative exploration research and ques-

<sup>4</sup> [http://www.knf.gov.pl/opracowania/rynek\\_ubezpieczen/Dane\\_o\\_rynku/Dane\\_nt\\_posrednictwa/agenci.html](http://www.knf.gov.pl/opracowania/rynek_ubezpieczen/Dane_o_rynku/Dane_nt_posrednictwa/agenci.html) [access: 24.05.2016].

<sup>5</sup> Act on insurance intermediation from 22 May 2003 ("Journal of Laws", No. 124, Item 1154), <http://www.posrednicy.org.pl/akty-prawne> [access: 11.05.2016].

tions related with firm performance. This kind of selection allowed to avoid the risk associated with the sample hidden diversity. All of the analyzed features are presented below.

**Table 1**  
**Analyzed features (model variables)**

| Acronym                      | Dependent variable                           | Range of values   |
|------------------------------|--|---|
| FP                           | firm performance                             | < -1.72; 1.98>  |
| <b>Independent variables</b> |  |   |
| CA                           | customer analysis                            | < -2.13; 2.30>  |
| ToC                          | type of customer                             | 1 - only individual customers,<br>5 - only business customers |
| EI                           | extraordinary incidents (fire, floods, etc.) | 1-5   |
| CBP                          | customer bargaining power                    | 1-5   |
| AR                           | agent's reputation                           | 1-5   |
| OSCR                         | other sales channel risk                     | 1-5   |
| PP                           | product profitability                        | 1 - low; 5 - high   |
| G                            | gender                                       | 0 - women, 1 - men  |
| A                            | age  | 20-70   |
| LoS                          | length of service (in years)                 | 0-35  |
| NoC                          | number of customers                          | 2-15000   |
| OW                           | offer width                                  | 0 - captive, 1 - independent                                  |
| CRM                          | use of CRM software                          | 1 - none; 5 - high  |
| CW                           | co-workers                                   | 0 - no, 1 - yes   |

Source: own preparation.

Firm performance (FP) is an aggregated variable, where the total 8 questions, measured on a Likert scale, have been reduced using exploratory factor analysis (principal axis method) to one dimension. Firm performance (FP) includes positions related to declared level of net income, net profit/loss, customer lifetime value and profitability in two perspectives: reference to the past and reference to other agents. The purpose of using these perspectives is to find the baselines for firm performance in absence of objective measures. Customer analysis (CA) is also an aggregated variable, where the total 8 questions, measured on a Likert scale, have been similarly reduced. Customer analysis includes positions related to activities of managing the knowledge on customers (gathering information on revenues, costs, recommendations and other values related to customers) as well as measurement of customer metrics (customer lifetime value, customer profitability).

The relationship between independent variables and firm performance has been verified by multiple regression methods (enter in the first step and backward in the second step). This

composition of methods allows achieving the most economical model, with no insignificant predictors, eliminated in the order of p-value (from the highest to lowest).

Due to the type of the sample used for the quantitative study (auto-selective sampling) is not possible to obtain statistical generalization of the results to the whole micro-enterprises population, operating on insurance market and the level of significance refers only to the results of the sample. But it is possible to identify a situation in which the results of research presented can be applied by analytical generalization (Kvale 2007), assuming that the insurance market (here: insurance agents) has the same characteristic like the whole micro-enterprises population, operating on other financial advisers' markets (Płonka 2004). Because of the research method based on respondent's declarations (questionnaire interview and IDIs), the results of the study should also be treated carefully when evaluating.

## Empirical Results

Table 2 presents the summary of the second step model and table 3 depicts the results of the variance analysis.

**Table 2**  
**Regression model. Summary**

| Model | R    | R-squared | Adjusted R-squared | The standard error of the estimate |
|-------|------|-----------|--------------------|------------------------------------|
| 1     | .557 | .310      | .296               | .83288453                          |

Source: like in Table 1.

**Table 3**  
**Anova<sup>a</sup>**

| Model | R          | R-squared | Adjusted R-squared | The standard error of the estimate | Model  |                   |
|-------|------------|-----------|--------------------|------------------------------------|--------|-------------------|
| 1     | Regression | 118.691   | 8                  | 14.836                             | 21.387 | .000 <sup>b</sup> |
|       | Residual   | 263.605   | 380                | .694                               |        |                   |
|       | Total      | 382.295   | 388                |                                    |        |                   |

<sup>a</sup> Dependent variable: firm performance.

Source: like in Table 1.

Adjusted R squared is 0.296, which means that using eight predictors, the 30% of the variance of the dependent variable have been explained almost the same as in the first step, but without insignificant variables. The analysis of variance shows that the model is statisti-



cally significant, hence its predictability of the dependent variable is better than based on the mean. In table 4 the values of the coefficients are presented.

**Table 4**  
**Coefficients<sup>a</sup>**

| Model | Unstandardized Coefficients |            | Standardized Coefficients | <i>t</i> | Sig.   | Colinearity Statistics |      |       |
|-------|-----------------------------|------------|---------------------------|----------|--------|------------------------|------|-------|
|       | <i>B</i>                    | Std. Error | Beta                      |          |        | Tolerance              | VIF  |       |
| 1     | (Const.)                    | -.891      | .297                      |          | -2.999 | .003                   |      |       |
|       | CW                          | .311       | .089                      | .152     | 3.510  | .001                   | .973 | 1.027 |
|       | AR                          | .194       | .042                      | .203     | 4.665  | .000                   | .954 | 1.048 |
|       | CA                          | .158       | .047                      | .155     | 3.362  | .001                   | .855 | 1.169 |
|       | PP                          | .126       | .038                      | .152     | 3.308  | .001                   | .861 | 1.161 |
|       | ToC                         | .126       | .039                      | .149     | 3.214  | .001                   | .847 | 1.180 |
|       | EI                          | .094       | .037                      | .113     | 2.520  | .012                   | .894 | 1.118 |
|       | OSCR                        | -.201      | .032                      | -.271    | -6.193 | .000                   | .948 | 1.055 |
|       | A                           | -.008      | .004                      | -.100    | -2.277 | .023                   | .948 | 1.055 |

<sup>a</sup> Dependent variable: firm performance.  
Source: like in Table 1.

During the analysis process, no collinearity and heteroscedasticity (among the continuous variables) have been identified. Due to the applied method, the level of statistical significance has been changing. The statistically significant predictors are: co-workers (CW), agent's reputation (AR), customer analysis (CA), product profitability (PP), type of customer (ToC), and extraordinary level of insurance incidents (fires, floods, etc. - EI), other sales channel risk (OSCR) and age (A). Mathematical formula that allows showing the scope of mutual determination and predicting potential changes as a result of their interaction is presented below:

$$\text{Firm Performance} = -0.891 + 0.311 \text{ CW} + 0.194 \text{ AR} + 0.158 \text{ CA} + 0.126 \text{ PP} + 0.126 \text{ ToC} + 0.094 \text{ EI} + (-0.201) \text{ OSCR} + (-0.008) \text{ A} \quad (4)$$

The interpretation is difficult by the lack of natural units of measure (among the continuous variables). However, one can assume that if no variables are mentioned, the level of firm performance is -0.891. It changes according to B-value, while the level of the independent variable increases by one point. The variable with the highest B-values (0.311) is co-workers (CW). Changing this variable from "0" to "1" (from "working alone" to "working with co-



workers”) increases the firm performance by 0.311. Variables with B-values between 0,1 and 0,2 are agent’s reputation (AR), customer analysis (CA), product profitability (PP) and type of customer (ToC). The variable with B-values between 0 and 0,1 is extraordinary level of insurance incidents (fires, floods, etc. - EI). There are also two negative coefficients. They come with variables: other sales channel risk (OSCR) and age (A). When the perceived other sales channel risk grows, the firm performance decreases. Similarly, age of the agent decreases the firm performance by the factor of 0.008 for a year.

## Discussion

The purpose of this paper was to identify the impact of conducting customer analysis on firm performance. The resulting regression equation shows that conducting customer analysis increases the firm performance by the factor of 0.158. It is more than the degree to which the change from selling low to high margin insurance products affects the firm performance (0.126). Similarly, conducting customer analysis allows higher improvement of performance than changing the customer profile from consumer to business customers (0.126). The use of dedicated CRM software does not directly influence the firm performance.

Having co-workers exerts the most significant influence on firm performance. It increases the firm performance by the factor of 0.311 which can be explained with economies of scale. The next variable, which influences firm performance to a large extent, however with a negative sign, are the risks associated with other sales channels, presumably with the on-line direct sales. Their impact on the firm performance amounts to (-0.201). Agent’s reputation increases the firm performance by the factor of 0.194.

The category of factors on which agents have no influence comprises extraordinary events (fires, floods, thefts, accidents, etc.) that occurred during the year preceding the survey. They can cause customers’ greater willingness to enter into a contract of insurance. This factor increases the firm performance by 0.094. The last of the factors taken into consideration is age of the agent. According to the regression results, it decreases to a small extent the firm performance (-0.008). Analysis of scatter plot does not reveal any relationships between these variable. Hence, it contradicts the circulating opinion that the most successful are middle-aged agents due to their perceived credibility.

The below mentioned factors turned out not to be significant predictors of firm performance: agent’s gender, number of customers, length of service, customer bargaining power, and – already mentioned – the use of dedicated CRM software.

Variables influencing the firm performance can be attributed into following categories:

- activities - performing customer analysis
- assets and their consequences – co-workers, agent’s reputation, other channel sales risk
- strategic choices – product profitability, type of customers
- independent variables – extraordinary incidents, agent’s age

In order to demonstrate the influence of various variables on firm performance we adopt the approach of Day and Fahey. They believe that the influence of customer relationship-oriented actions on the creation of the value<sup>6</sup> may be achieved by:

- existence of previous cash flows
- increase in cash flow level
- reduction of risk associated with cash flows
- increase in residual value (Day, Fahey 1988)

From the perspective of this study customer analysis is an important factor. It influences the firm performance mostly by increase in cash flows. Customer analysis allows to rank customers according to their profitability. Activities oriented at most profitable customers aim at rather reduction of the attrition rate than increasing their short term profitability and include: limitation of gap in value for them, limitation of non-monetary costs of their relations with the company, imposition of switching costs (Doligalski 2015). On the other hand, the activities oriented at low profit and unprofitable customers aim at reduction of losses on them or/and increasing their profitability. The scope of activities includes elimination of cost-generating factors, additional sales (cross- and upselling), strict cost control and price augmentation. Some researchers also advice to terminate relationships with selected customers (Peppers, Rogers 2011, p. 146; Awdziej 2009). Insurance industry may be burdened with high percentage of unprofitable customers due to important role played by customer service and high level of customer's bargain force. As a result, service costs constitute a significant part of overall customer costs (especially from agent's perspective). Actions oriented at usually numerous group of medium-profit customers include additional sales and imposition of switching costs; and are combination of actions oriented at two extreme groups of customers (see Table 5).

**Table 5**  
**Possible relationships between actions oriented at customer segments and sources of company's value**

|  | Existence of previous cash flows | Increase in cash flow level | Reduction of risk associated with cash flows | Increase in residual value |
|--|----------------------------------|-----------------------------|--|----------------------------|
| Small group of high-profit customers   |                                  |                             | +  | ++                         |
| Large group of medium-profit customers |                                  | +                           |  |                            |
| Low-profit and unprofitable customers  |                                  | ++                          |  |                            |

Where: ++ (strong influence), + (moderate influence).  
Source: like in Table 1.

<sup>6</sup> Note that company's value is just only one measure of firm performance, however is used here for demonstration purposes.

The next category of factors includes assets and their consequences. They are co-workers, agent's reputation and other channel sales risk. All these variables are dependent on the previous periods, in other words: they are usually developed in the long run and may be treated as indicators of established competitive position. Moreover, they remain in a feedback relationship with firm performance. Higher firm performance may result in hiring new co-workers, advertising campaigns improving reputation and lower perception of risk related to direct sales channels. Note that the three variables exert the strongest impact on company's performance. It shows that a developed in the long term competitive position influences the agent's performance the most.

Having co-workers allows to enhance cash flows, as the company may serve higher number of customers. It may lead to reduction of cash flow volatility as the company is dependent on a higher number of customers. Agent's reputation contributes to faster customer acquisition (previous cash flow) and possible demanding higher prices (increase in cash flow level). Low level of other channel sales risk contributes to cash flow enhancement and their lower volatility.

Category of strategic choices includes product profitability (high/low) and type of customers served (consumers/business clients). We attribute them to the category of strategic choices, however they can be also perceived as a consequence of established competitive position. Both lead to increase in cash flow level. Business clients may be also more loyal in the usage of insurance services, hence fewer risks are associated with their cash flows.

Extraordinary incidents may cause subjects to enter insurance contracts, hence they accelerate and enhance cash flows. The last variable - agent's age - has a small impact on profitability. Younger agents possibly take better advantage of information and communication technology (ITC), thus leading to increase in cash flows (see Table 6).

**Table 6**  
**Possible relationships between outcome variables and sources of company's value**

|                                       | Existence of previous cash flows | Increase in cash flow level | Reduction of risk associated with cash flows | Increase in residual value |
|---------------------------------------|----------------------------------|-----------------------------|--|----------------------------|
| Co-workers                            |                                  | ++                          | +  |                            |
| Agent's reputation                    | +                                | ++                          |  |                            |
| Low level of other channel sales risk |                                  | +                           | +  |                            |
| Product profitability                 |                                  | +                           |  |                            |
| Serving business clients              |                                  | +                           | +  |                            |
| Extraordinary incidents               | +                                | +                           |  |                            |
| Agent's young age                     |                                  | +                           |  |                            |

Where: ++ (strong influence), + (moderate influence).

Source: like in Table 1.

The above narration attributes the distinguished factors to four sources of company's value. The identified outcome variables exert the biggest influence on the increase in cash flows level. This attribution is however of speculative and contextual nature. Another study could fill this research gap and help to understand the relationships between various factors and sources of company's value

Discussing the research results, one should also mention its limitations. Due to the difficulty in obtaining answers for direct questions about firm performance, the survey questions concerned rather the comparison of financial measures to the prior year, as well as to competitors. In the first case the agents had quite precise knowledge, in the second – the evaluation was based on their assumptions. Total 8 questions on firm performance have been reduced using an exploratory factor analysis to one dimension. The method reduces the volatility of a one measure, however makes it impossible to formulate conclusions that the change in one variable leads to e.g. 10% change of the profit. It allows though to identify the impact of variables on the declared level of firm performance. Finally, there is a feedback loop possible – higher financial performance may also increase investments in the field of customer analytics.

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## **Analiza klientów i wyniki firm na polskim rynku ubezpieczeniowym. Perspektywa rentowności klienta i oceny jego wartości w czasie**

### **Streszczenie**

Autorzy artykułu podjęli próbę odpowiedzi na pytanie badawcze, czy prowadzenie analizy klienta poprawia wyniki firmy. Przedstawiają wyniki badań wśród polskich agentów ubezpieczeniowych. Zgodnie z ich ustaleniami, prowadzenie analizy klienta jest pozytywnie skorelowane z wynikami firmy. Inne czynniki determinujące wyniki firmy są w dużej mierze związane z ekonomią skali i ugruntowaną pozycją konkurencyjną (tzn. współpracownikami, niską percepcją ryzyka związanego z innymi kanałami, reputacją agentów). Użycie specjalistycznego oprogramowania dla zarządzania relacjami z klientami (CRM) nie wpływa na wyniki firmy. Wyniki badań zostały omówione z perspektywy rentowności klienta i jego wartości w czasie.

**Słowa kluczowe:** analiza klienta, rentowność klienta, wartość klienta w czasie, wyniki firmy, reputacja, ubezpieczenia, EŚW, Polska.

**Kody JEL:** M3

## **Анализ клиентов и результаты фирм на польском рынке страхования. Перспектива рентабельности клиентов и перспектива жизненного цикла клиента**

### **Резюме**

В своей статье авторы стараются ответить на исследовательский вопрос, улучшает ли результаты фирм проведение анализа клиентов. Она представляет результаты обследования польских страховых агентов. В соответствии с его результатами проведение анализа клиентов имеет положительную корреляцию с результатами фирм. Другие факторы, определяющие результаты фирм, в большой мере связаны с эффектом масштаба и установленной конку-

рентной позиции (т.е. сотрудниками, низким восприятием риска, связанного с другими каналами, репутацией агентов). Применение целевого программного обеспечения управления отношениями с клиентами (CRM) не влияет на результаты фирм. Результаты изучения обсуждаются из перспективы рентабельности клиента и его жизненного цикла.

**Ключевые слова:** анализ клиента, рентабельность клиента, жизненный цикл клиента, результаты фирмы, репутация, страхование, Центральная-Восточная Европа, Польша.

**Коды JEL:** M3

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