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The Effect of Marketing Expenditures on Business Performance: Time Series Analysis on Causality

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Abstract

This study examines the effect of marketing expenditures in the insurance sector on business performance. The original point of the study is; first study conducted in the insurance sector in terms of marketing expenditures and business performance, examining the marketing performance of the unsought products and investigating the marketing expenditures related to the insurance sector in terms of Islamic regions and unlike other business performance indicators, investors' profit per share are also taken into consideration. The vector autoregressive model was applied. According to the results of the study, marketing expenditures have a significant and positive effect on the net profit and profit per share variables. Moreover, the relationship between these variables is bidirectional. In other words, while the increase in marketing expenditures increases the net profit and earnings per share, the increase in the net profit and per share enhances the increase in marketing expenditures. In addition, marketing expenditures started to have a high impact on net profit and earnings per share as of the second period, while marketing expenditures started to have a high impact on net profit and per share as of the third quarter. As a result, the effect between the variables appears in the short term.

Keywords: Marketing Expenditures, Net Profit, Profit Per Share, Vector Autoregressive Model, Business Performance

JEL Codes: L25, M10, M21, M30, M31

1. Introduction

The insurance-growth relationship has become important due to the growth of insurance in the financial sector in the last few decades (Lee et al., 2013, p. 406). Therefore, academic studies have been conducted to determine the relationship between insurance and growth in the literature.

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Pradhan et al. (2017) stated that the development of the insurance sector had a significant effect on the economic growth of the G-20 countries in the long run (Pradhan, Arvin, Nair, Hall and Gupta, 2017, p. 12). In addition, according to a study conducted by Lee et. al. in 2013, there is a significant long-term and bi-directional relationship between the level of economic actions and the life insurance market, and therefore a high level of economic growth leads to a high insurance premium level, and vice versa (Lee et al., 2013, p. 421). As a result, it can be stated that the insurance sector is one of the major components of the economies of developed countries (Cristea, Marcu and Cârstina, 2014, p. 227) and is one of the necessary elements to contribute to a meaningful economic growth (Gaganis et al., 2019, p. 104). Since 1950, the annual growth rate of the global insurance industry is more than 10% and this situation supports the importance of the insurance sector in the economy (Lee et al., 2013, p. 406). In addition, the insurance sector is one of the sectors that can grow in crisis environments. For example, despite the 2008-2009 recession, the global growth average of the insurance sector in 2007-2016 was 2.5%. In terms of the countries contributing to this growth in the insurance sector, developing countries grew by 4.8%, while developed countries grew by 2.4% (Insurance Association of Turkey, 2017). Therefore, it can be stated that developing countries can make significant contributions to the insurance sector. In addition, the growth of the insurance sector may provide the economic growth in the developing economies. Therefore, it is important for countries to consider, encourage and develop the insurance sector in terms of contribution to the country's economy. In order to support the insurance sector, it is necessary to take into account the consumers' needs and wishes in the target market. Because according to the literature, a wide variety of variables (dependency ratio, religion, etc.) affect insurance consumption and these variables vary from country to country (Chui and Kwok, 2008, p. 94). For example, according to Browne and Kim (1993), religious people tend to buy less life insurance because religious people believe that buying insurance will disrupt God's protection and Browne and Kim (1993) and Beck and Webb (2003) found that life insurance consumption in Islamic countries was significantly lower than in other countries (cited by Chui and Kwok, 2008, p. 94).

Turkey was chosen as a country in this work. Because Turkey is an important middle-income developing countries and foreign investment accounted for approximately 65% of the country's stock exchanges (Ararat, Black and Yurtoglu, 2017, p. 114). Turkey also has the second-largest stock market in the middle east region (Białkowski, Bohl, Kaufmann and Wisniewski, 2013, p. 212). As a result, Turkey is an important emerging market and it is thought that this result is a feature that can attract the attention of all investors. In addition, Turkey is also one of the developing and islamic countries and support and encouraging the insurance sector crucially. For example, Turkey offers to extra 25% State contribution over the amount premium paid by participant that registered the individual pension system. In addition to the state contribution, the law has been enacted to enable employees to register with the automatic pension system. Thus, employees were encouraged to participate in the individual pension system to save money. The automatic participation in the individual pension system is based on voluntariness and started on 1 January 2017. As of 2019, approximately 14 million employees are expected to be included in the individual pension system. By year of 2017, total net asset value of fund including state contribution was 77.8 billion TL (Insurance Association of Turkey, 2017). As a result, the insurance sector is considered important in terms of Turkey.

The 2017 report of the Insurance Association of Turkey, there are 68 one insurance company in Turkey. These companies have three different types of life, non-life and reinsurance. One of these companies is life insurance companies, which are divided into two as pension and

life. The total net asset value of fund amount of the pension companies is 79.6 billion TL and it has grown by 30.8% compared to 2016 year-end. The total net asset value of fund of the life insurance companies is 6.8 billion TL and it has grown by 35.8% compared to 2016 year-end. Another type of insurance company situated in Turkey are the non-life insurance companies. The total premium production of these insurance companies was 39.7 billion TL and it increased by 12.1% compared to 2016 year-end. In addition, the highest premium in terms of this type of insurance is the land vehicle liability premium. Lastly, re-insurance companies from insurance companies have 3 and total premium production is 1.1 billion TL and it has grown by 18.5% compared to 2016 year-end (Insurance Association of Turkey, 2017). As a result, Turkey provides significant incentives and support for the insurance sector. However, the Turkish state is not the only actor in the field of insurance. On the contrary, the companies in the insurance sector have an important role. Because according to the IMF, insurance companies are important financial intermediaries for the global financial markets and developed economies (IMF: Global Financial Stability Report, 2016: 6-7). In addition, according to Lee et al., insurance companies are one of the largest institutional investors for the stock, bond and real estate market (Lee, Lee and Chiou, 2017, p. 155).

Insurance industry is highly competitive industry (Felício and Rodrigues, 2015, p. 1622). Due to the high number of businesses involved in the insurance sector in Turkey is said to be a very serious competition. In this case, consumers are free to choose their insurers and insurance companies need to know why consumers choose their companies or not (Fang, Jiang and Song, 2016, p. 554). So, insurance companies should be able to accurately estimate or determine consumers' needs, desires and demands to overcome the highly competition. In other words, insurance companies should establish marketing actions correctly and try to reach consumers. For example, according to the Felício and Rodrigues (2015), life insurance companies gain the confidence of consumers by paying more attention to the motivations of consumers and thus improving their performance and fostering their ability to meet the needs of consumers (Felício and Rodrigues, 2015, p. 1628). Because, according to Rajapathirana and Hui (2018), demographic changes, advancement of communication and information technologies, and changing consumer behavior have a significant impact on the efficiently and productivity of the industries (Rajapathirana and Hui, 2018, p. 44). Socio-cultural determinants also play important roles in the purchasing process (Ward and Zurbruegg, 2000, p. 492). For this reason, these factors should be analyzed in detail by insurance companies. As a result, all consumer-related processes should be taken into account and marketing research should be done well. Because the risk management technique is shaped by culture, it varies from country to country (Ward and Zurbruegg, 2000, p. 504) and therefore marketing activities carried out by companies are important.

According to O'Cass and Ngo (2012), the companies' value offering should differ from their competitors because value offering provides a competitive advantage over competitors and survive and in this case, high service value can improve companies performance through high profits, share value and sales growth (Chuang and Lin, 2017, p. 28-29). For example, life insurance companies pay more attention to consumers' motivation and organizational resources and improve business performance by focusing directly on meeting the needs of consumers (Felício and Rodrigues, 2015, p. 1628). In conclusion, it is an important field of study to investigate the effect of marketing expenditure of insurance companies on their business performance. As a result, the aim of this study is to test the effect of marketing expenditure on business performance indicators in insurance industry. Because the number of studies on the performance indicators of insurance

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companies is limited (Felício and Rodrigues, 2015, p. 1623). The original point of the study is that it is the first study conducted in the insurance sector in terms of marketing expenditures and business performance, and, unlike other business performance indicators, investors' profit per share are also taken into consideration. Therefore, this study is thought to add value to the literature.

2. Insurance

Risk is a feature that can always influence the decisions of companies and while traditional risk is measured by political, commercial, macroeconomic and external risk, the risk at the country level is considered as lack of internal security, high inflation rate, non-implementation of contracts and high external debt level (Romilly, 2007, p. 474). Risk management is a very important phenomenon for both countries and companies. The insurance industry is generally different from other industries and has a high level of intangible risk, and Insurance is the management of all types of risks (Rajapathirana and Hui, 2018, p. 53). In other words, the insurance industry provides risk management services to companies as a financial intermediary and has a direct impact on economies through benefits such as insurance consumption, risk transfer and assurance, and economic growth as a result of risk management (Latif and Fiador, 2014, p. 86; Bazini, Elmazi and Sinanaj, 2012, p. 155-156). According to the Longman Dictionary of Contemporary English, definition of insurance as a phenomenon is "an arrangement in which a company collects premiums (=regular payments) from a person or organization and in return agrees to pay them a sum of money if they are involved in an accident, have something stolen, or cause harm or injury to others" (Longman Dictionary of Contemporary English, 2019). As a result, it can be understood from the definition that insurance is seen as an industry in which risk is managed efficiently and contributes to the growth of the country. However, the insurance industry facilitates these benefits not only through economic transactions such as transfer of risks and granting for emerging risks, but also as supporters of financial intermediation (cited by Cristea et al., 2014, p. 227; Latif and Fiador, 2014, p. 83). Therefore, the weight and significance of insurance in the financial sector is constantly increasing (Gaganis, Hasan, Papadimitri and Tasiou, 2019, p. 104) and the development of the insurance market in the economy is important (Lee and Chiu, 2016, p. 345).

Insurance consists of three sub-dimensions: non-life, life and reinsurance (IAIS, 2018). Non-life insurance, which is one of the insurance types, refers to the types of insurance where human life is not included, while life insurance, which is another type, is related to human life, human bodily integrity and health (Külekçi and Saldanlı, 2019, p. 229). According to Beck and Webb (2003), life insurance companies also play important role in the financial sector (Beck and Webb, 2003, p. 51). In addition, life and non-life insurance have a positive and significant impact on economic growth through premium gains, but this effect may also vary depending on the countries' high/low income and economic development level (Arena, 2008, p. 938). According to Nomer and Yunak (2003), reinsurance, which is the last type of insurance, is defined as the transfer of some or all of the risk taken by the insurer to another insurer and according to the European Parliamentary Council of the European Union (2005), reinsurance that require very large intermediaries and institutional investors play a fundamental role in ensuring financial stability by providing assurance to insurance companies. (cited by Külekçi, 2018, p. 29). As a result, insurance market influences economic performance through different investment areas (Hou et al., 2012, p. 126). For example, life insurance companies focus on long-term investments, while non-life insurance companies focus on short-term investments (Arena, 2008, p. 923). The main source of investments and expenditures made by insurance companies is the premiums obtained from consumers (Fang et al., 2016, p. 555). Most insurance companies face difficulties due to increased

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expectations for personalized products and services, advanced technological development and macroeconomic variables, and therefore the use or management of information in a knowledge-intensive sector such as the insurance sector is becoming crucial the changing environmental conditions (cited by Rajapathirana and Hui, 2018, p. 45-50). Therefore, it is important for insurance companies to recognize consumers, understand and offer value for their wishes and needs. So, insurance companies will be able to increase their market share by acting more consumer oriented. Thus, it will be possible to influence the performance indicators of insurance companies as a result of marketing effort.

3. Marketing Expenditures and Business Performance

Since the insurance sector is in serious competition, the profitability in the insurance sector depends on the services offered by the companies and on meeting of customer demands regularly (Matiş and Ilieş, 2014, p. 1139). For this reason, even in a serious economic crisis, insurance organizations can focus on retaining the customer or gaining new customers by preserving the income and market value of the companies and taking actions to respond to the needs and convenience of consumers (Felício and Rodrigues, 2015, p. 1623). Because customer focus has a significant and positive impact on firm performance (Grissemann et al., 2013, p. 353). Motivated and well-understood customers also can lead to better economic performance of organizations (Felício and Rodrigues, 2015, p. 1623). Therefore, the benefits that best suit the needs of consumers should be offered to them (Chui and Kwok, 2008, p. 89) and these presentations also should be taken into account in cultural perceptions (Chui and Kwok, 2008, p. 94). Thus, the value proposition offered by the insurance company can provide a competitive advantage and differentiation for the company, which can lead to high profitability, market share and growth of sales (cited by Chuang and Lin, 2017, p. 28-29). Because profitability is one of the important factors in terms of sustainability in financial sectors (Özgür and Görüş, 2016, p. 228). As a result, a sustainable competitive advantage may also lead to superior financial performance (Mizik and Jacobson, 2003, p. 63).

The competitive advantage created on the basis of the specific needs of consumers can increase not only financial performance but also non-financial performance (loyalty, retention and recognition) by supporting consumers' willingness to pay more (Grissemann et al., 2013, p. 349). Therefore, in order to increase sales and profitability, the more companies become aware of the needs of their consumers, the more likely they produce products for consumers, and this is one of the main themes of developing a long-term profitability relationship with consumers (Bazini et al., 2012, p. 159). Because, relationship marketing is a necessary approach for a long-term profitable relationship for the insurance sector like in all sectors (Crosby and Stephens, 1987, p. 405). For example, the first focused strategy on the insurance sector that in developing in Central and Eastern European countries is to become accessible and to attract consumers by developing products that meet the needs of the consumer (Matiş and Ilieş, 2014, p. 1139). As a result, marketing by insurance companies is not just advertising or promoting the product to the consumer. On the contrary, these companies should use the marketing department first to recognize their consumers and then to develop products and brands for their consumers. Thus, the performance indicators of insurance companies will be better. When the literature is examined, it is seen that different variables are used for business performance indicators. For example, variables such as ROS, sales growth and productivity (Felício and Rodrigues, 2015, p. 24); annual profit, income, costs, average profit (Tomić and Milić, 2013, p. 250); profit (Choi et al., 2017, p. 40); profit growth, sales

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increase, and productivity improvement (Nishitani, Jannah, Kaneko and Hardinsyah, 2017, p. 15); net sales and growth rate (Candemir and Zalluhoglu, 2011, p. 294); Sales growth rate, market share, profitability, firm revenue and return on investment (ROI) (Tseng, Chiu and Chen, 2009, p. 686-689); profit, business survival, the number of employees and business turnover (cited by Aidis and van Praag, 2007, p. 287); revenues, profit, or stock prices (Grissemann, Plank and Brunner-Sperdin, 2013, p. 349) were used as performance indicators. With regard to these performance indicators in the literature, marketing expenditures is one of the most important factors influencing the sales of companies (Candemir and Zalluhoglu, 2011, p. 297) and according to Ngai and Ellis, company performance is related to marketing practices, not market orientation (cited by Siu, 2002, p. 179). Therefore, companies should be able to improve their marketing effectiveness in order to achieve superior performance (Hanssens, Wang and Zhang, 2016, p.712).

Efficient implementation of marketing by companies can improve operational performance. For example, according to a study conducted by Arena in 2008, there is a significant causal relationship between insurance market actions and economic growth and the premiums collected by insurance companies (life and non-life insurance premiums) positively affect the economic growth of countries (Arena, 2008, p. 922). A similar study by Pradhan et al. also found a causal relationship between insurance market actions and per capita economic growth (Pradhan et al., 2017, p. 23). According to another study conducted in Ghana, there is a long-term positive relationship between insurance penetration and economic growth (Latif and Fiador, 2014, p. 83). As a result, macro-scale (on a country basis) insurance penetration or market actions positively affect economic growth. This may also be the case at the micro scale (on the basis of companies). For example, according to a study by Felício and Rodrigues in 2015, customer motivations have an impact on the performance of insurance companies (Felício and Rodrigues, 2015). In addition, it has been found that the operational performance of companies applying customer relationship management system is improved (Haislip and Richardson, 2017, p. 28). According to the study conducted by Rajapathirana and Hui (2018), market performance has a significant effect on financial performance and according to the study conducted by Wu, Chen and Huang in 2015, marketing audit has a significant and positive effect on financial performance (Wu et al, 2015). As a result, it can be said that marketing actions and expenditures made by companies have a significant effect on business performance. For example, according to the study conducted by Ajagbe, Long, and Solomon in 2014, product branding and sales promotions affect organizational growth (Ajagbe, Long and Solomon, 2014, p. 164). Therefore, it is considered that the marketing expenditures made by insurance companies have a significant effect on the performance of the business. Therefore, H1 hypothesis was established.

H_1: Marketing expenditures have a significant and positive effect on business performance (net profit and profit per share).

4. Methodology

4.1. Data Collection

The data about the performance of insurance companies and obtained by spending have made their place in Public Disclosure Platform in Turkey were obtained from. The marketing expenditure and performance indicator data used in this study were obtained from the Public Disclosure Platform. Public Disclosure Platform (PDP) is “an electronic system through which electronically signed notifications required by the capital markets and Borsa Istanbul regulations are publicly disclosed and within the framework of Capital Markets Board of Turkey's (CMB) 'Communiqué Regarding Principles of Submitting Electronically Signed Information, Documents and Notifications to the

Public Disclosure Platform', all information and documents to be publicly disclosed must be sent to the PDP" (www.kap.org.tr, 2019: Accessed date: 24.06.2019). Through to this system, all users can access past and current information (accurate, comprehensible, complete information) about Borsa İstanbul companies over the internet simultaneously and at low cost (www.kap.org.tr, 2019). Since PDP has been in operation since 2009, the data used in the research are from 2010-2018 and these data are in quarterly periods.

The number of insurance companies obtained from Public Disclosure Platform in this study is 1 and the name of this company is Anadolu Hayat Emeklilik. The reason for analyzing the data of Anadolu Hayat Emeklilik in this study is that the financial reports of this company have been complete since 2010. In addition, this company is the market leader in its sector (www.anadoluhayat.com.tr, 2019).

4.2. Time-Series Analysis

Time series analysis is one of the methods by which companies can investigate the effect of expenditure on business performance. Because the time series consists of data obtained at regular periods. In this study, marketing expenditures was used as independent variables and performance indicator was used as dependent variables. Performance indicators of these companies in the financial reports are net profit, and profit per share. Descriptive statistics of the variables are given in Table 1.

Table 1: Descriptive Statistics of the Variables

Variables	Mean	Median	Minimum	Maximum	Standart Deviation
Marketing Expenditure	5.519.624	5.250.858	2.406.478	10.659.461	2.169.704
Net Profit	33.747.763	29.041.371	9.028.791	71.308.596	18.329.051
Profit Per Share	0.089	0.076	0.025	0.158	0.035

Note: All values are in TL and $ 1 = $ 5.77 (27.06.2019)

According to Table 1, the amount of marketing expenditure and net profit generated by the insurance company appears to be an important item. In addition, the profit share of the shareholders is an important incentive for investors to invest in companies. All of these data were analyzed as quarterly data. As the monthly and quarterly data may have a seasonal effect in this study, the data were seasonally adjusted before the time series analysis. TRAMO / SEAT method was used for seasonally adjusted data. After seasonally adjusted all variables planned to be used in time series analysis, unit root test was applied to determine the appropriate analysis for the data. When the graphs of the variables were drawn, the unit root tests were analyzed as trend and intercept due to the trend of the graphs. The graph of the variables is given in Figure 1.

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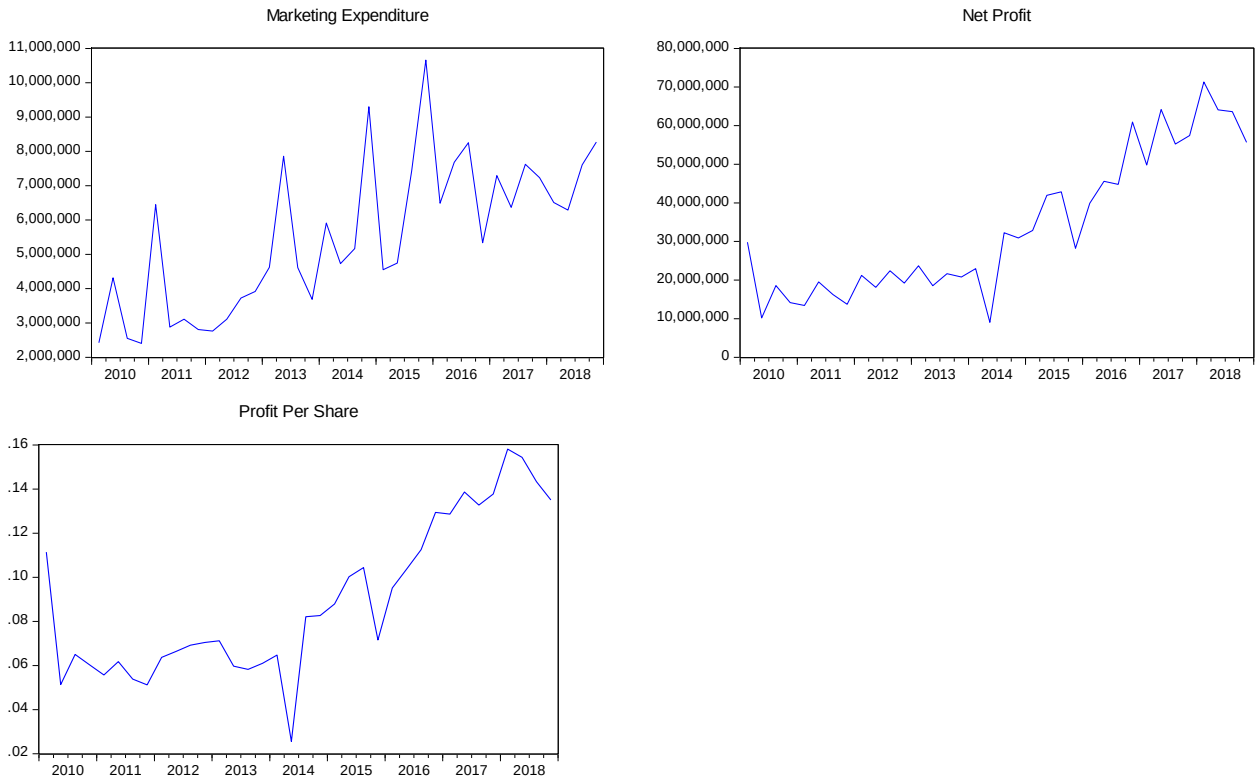

Figure 1: The Graph of the Variables

Before modeling the variables, it is necessary to examine whether the stationary of the variables is satisfied (Liu, Tseng and Tseng, 2018, p. 129; Chatziantoniou, Filis, Eeckels and Apostolakis, 2013, p. 336). Augmented Dickey-Fuller (DF) (1979) test and the Phillips-Perron (PP) test (1988) can be used to perform the stationarity test, and the absence hypothesis for these two tests is that the series contains unit root. In order to reject the null hypothesis, the calculated test statistic value must be less than the critical value (Latif and Fiador, 2014, p. 88). When Figure 2 is taken into consideration, the unit root test was applied to the intercept and trend model because of the trend effect seen in the series. Unit Root Tests at the Levels of the Variables is shown in Table 2.

Table 2: Unit Root Tests at the Levels of the Variables

Insurance Corporate	Variables	ADF Test (Null Hypotesis: Variable has a unit root)		PP Test (Null Hypotesis: Variable has a unit root)	
		Test Statistic	Critical Value at 0.05 Level	Test Statistic	Critical Value at 0.05 Level
Anadolu Hayat Emeklilik	Marketing Expenditure(ME)	-5.80	-3.54*	-5.80	-3.54*
	Net Profit (NP)	-4.80		-4.82	
	Profit Per Share (PPS)	-4.76		-4.72	

* MacKinnon (1996)

According to Table 2, the ADF and PP test statistics for variables are in the rejection region. In other words, marketing expenditure, net profit and profit per share were stationary at the level for intercept and trend model. Therefore, Vector AutoRegressive Model (VAR) was used to analyze the relationship between the two variables. Although the main purpose of the VAR model, which is proposed by Sims and generally used on macroeconomic variables (Lin et al., 2019, p.

403-404), is forecasting, it can also be used to analyze the causal relationships between economic time series variables (Shin and Park, 2005, p. 227). VAR model is a system equation where variables are considered as endogenous variables and the dependent variable is predicted by taking into account the lagged values of the variables (Liu et al., 2018, p. 129). The VAR model can also be used to analyze dynamic shocks and responses between variables (Shin and Park, 2005, p. 227) and define the interaction between variables through variance separation and response functions (Shin and Park, 2005, p. 225). While the impulse-response function shows the effect of endogenous variables on other variables (Shin and Park, 2005, p. 229), variance decomposition in terms of variables gives the contribution of one variable on the other variable according to periods. The number of lags used in the VAR model is defined by the p value and is shown as VAR (p) (Shin and Park, 2005, p. 227). VAR model assumptions must be provided in order to accurately analyze the econometric estimates made with the VAR model. So time series assumptions for the variables are shown in Table 3 for VAR model.

Table 3: Results of the Time Series Assumptions in Relationship Between Independent and Dependent Variables in terms of Anadolu Hayat Emeklilik Company

Assumptions	ME ⟶ NP	ME ⟶ PPS
Serial Correlation LM test	p > 0.05	p > 0.05
Normality	Jarque-Bera=3.33 (p=0.50)	Jarque-Bera=7.58 (p=0.10)
Heteroskedasticity	χ^2=30.34 (p=0.17)	χ^2=33.71 (p=0.08)
Model	VAR (1 2)*	VAR (1 2)*

Note 1: The Lag Criteria is taken as 5 (Johnston and Dinardo, 1997)
* No Root lies outside the unit circle therefore, VAR satisfies the stability condition.

Assumptions about the equations investigated in the VAR model are provided. The impulse response functions and variance decomposition resulting from the VAR analysis are shown in Table 4 and Figure 2.

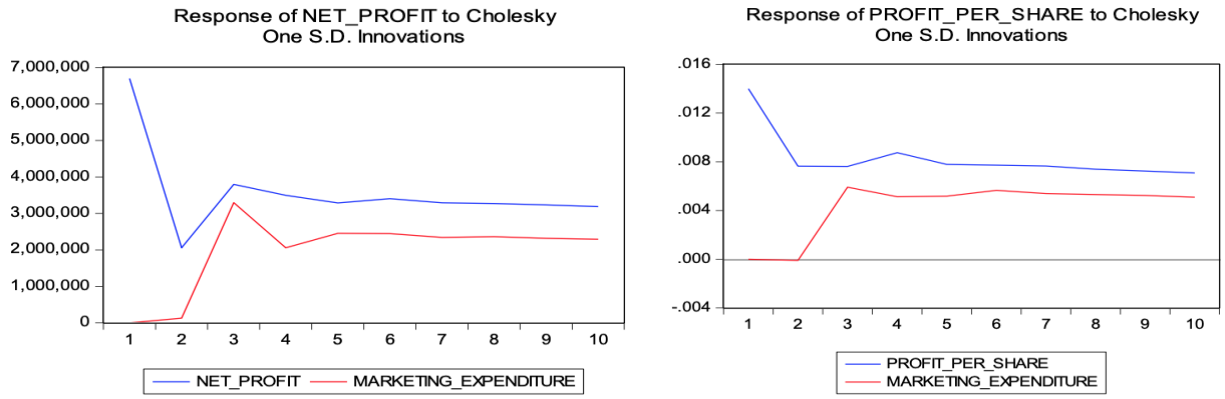

Figure 2: The Results of the Impulse Response Function

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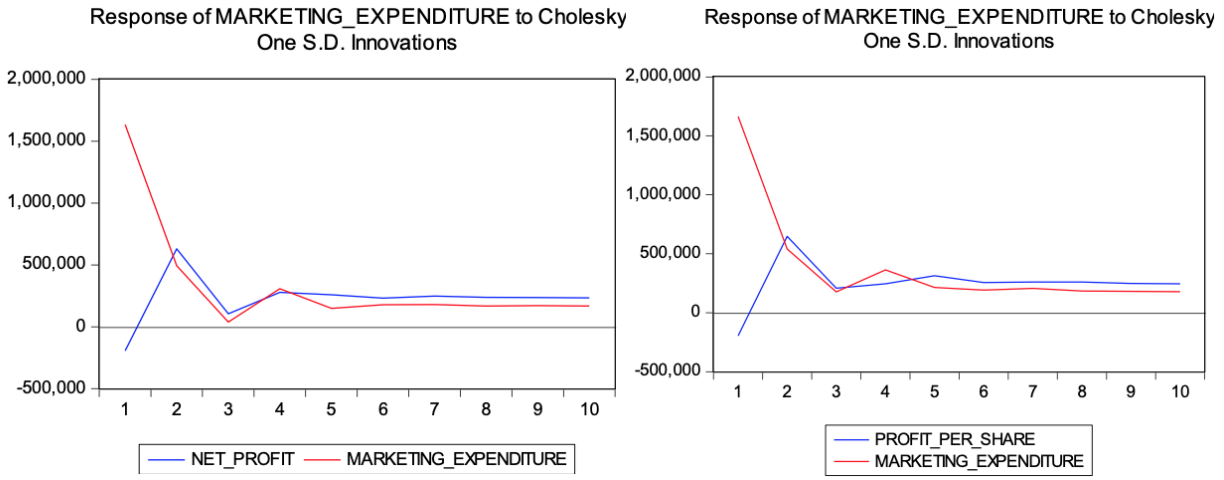

Figure 2: The Results of the Impulse Response Function (cont.)

One of the results of VAR analysis is Impulse Response Function. According to this analysis, the Impulse Response Function was interpreted separately for two different variables. According to the response on net profit of these functions; net profit started to decrease while marketing spending was at zero level. After 2 terms, marketing expenditures increased and as a result, net profit started to increase. The decline in marketing expenditures after the third period led to a lower tendency in net profit. In terms of the effect on marketing expenditures, the decrease in marketing expenditures from the highest value increased the net profit, but the decrease in marketing expenditures after a certain value affected the net profit negatively. As a result, it can be said that the variables of net profit and marketing expenditures act together. In the relationship between profit-per-share and marketing expenditures, the absence of marketing expenditures decreased the profit per share, whereas the increase in marketing expenditures stabilized the profit per share at a certain level. As a result, it can be said that marketing expenditures have positive effects for the shareholders. The effect of marketing expenditures on profit per share can be interpreted like the effect on net profit. In other words, two variables can act together. The other results of VAR is Variance Decomposition. The results of this analysis are shown in table 4.

Table 4: The Result of the Variance Decomposition in terms of Variable Relationship

Period	Variance Decomposition of Marketin Expenditure		Variance Decomposition of Net Profit	
	Net Profit	Marketing Expenditure	Net Profit	Marketing Expenditure
1	1.385	98.614	100.000	0.000
2	12.965	87.034	99.967	0.032
3	13.242	86.757	85.380	14.619
4	14.790	85.209	83.368	16.631
5	16.272	83.727	80.382	19.617
6	17.350	82.649	78.360	21.639
7	18.534	81.465	76.989	23.010
8	19.579	80.420	75.827	24.172
9	20.559	79.440	74.939	25.060
10	21.484	78.515	74.209	25.790

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Table 4: The Result of the Variance Decomposition in terms of Variable Relationship (cont)

Period	Variance Decomposition of Marketing Expenditure		Variance Decomposition of Profit Per Share	
	Profit Per Share	Marketing Expenditure	Profit Per Share	Marketing Expenditure
1	1.362	98.637	100.000	0.000
2	12.977	87.022	99.996	0.003
3	13.918	86.081	89.944	10.055
4	14.803	85.196	86.412	13.587
5	16.762	83.237	83.633	16.366
6	17.955	82.044	80.947	19.052
7	19.116	80.883	79.226	20.773
8	20.251	79.748	77.855	22.144
9	21.233	78.766	76.748	23.251
10	22.143	77.856	75.881	24.118

According to Table 4, the effect of net profit on marketing expenditures starts from the first period (1.38%) and the variance decomposition rate increases to 21.48% in the 10th period. In other words, in the 10th period after marketing expenditures, 21.48% of the marketing expenditures is explained by the net profit. Although the effect of marketing expenditures on net profit was initially 0, it increased to 25.79% in the 10th period. In other words, in the 10th period, 25.79% of the net profit is explained by the marketing expenditures. The effect of profit per share on marketing expenditures starts from the first period and shows a significant increase in the second period. In the 10th period, 22.14% of the marketing expenditures can be explained by the profit per share variable. In terms of profit per share variable, the effect of marketing expenditures is zero at the beginning, but this effect shows a significant increase in the third period. In the 10th period, 24.11% of the profit per share variable can be explained by marketing expenditures. In conclusion, whether the relationship between the variables is the cause and effect relationship may lead to important inferences. Therefore, Granger causality analysis was performed for the variables. Granger causality is used to test whether all lagged elements of a variable have an effect on other variables, and if the effect is significant, there is a causal relationship between the variables. In addition, the presence of granger causality shows the predictive power of the variables on each other (Liu et al., 2018: 129). The results for Granger causality are given in table 5.

Table 5: The Result of the Granger Causality Between Variables

Insurance Corporate	Independent Variables	Dependent Variables	F Stat. χ^2	df	Prob
Anadolu Hayat Emeklilik	Marketing Expenditure	Net Profit	8.41	2	0.014*
	Net Profit	Marketing Expenditure	11.934	2	0.002**
	Marketing Expenditure	Profit Per Share	7.07	2	0.029*
	Profit Per Share	Marketing Expenditure	10.47	2	0.005**

* Significant at 0.05 level.
** Significant at 0.01 level.

According to the results of Table 5, According to Table 5, H1 hypothesis cannot be rejected. In other words, marketing expenditures have a significant effect on net profit and profit per share and there is a causal relationship between marketing expenditures and net profit and profit per

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share. However, this relationship between variables is not unidirectional. On the contrary, there is a bidirectional causal relationship. In other words, the increase in marketing expenditures has a positive effect on net profit and profit per share. The increase in net profit and profit per share leads to an increase in marketing expenditures.

5. Discussion

Marketing is the area where there is the greatest willingness to spend for most companies, and many companies wish to invest more resources in marketing (Sheth and Sisodia, 2002, p.362). Because investing in marketing by companies is an investment for both customers and profitability. For example, life insurance companies pay more attention to customers' motivation and organizational resources and thus improve business performance (Felício and Rodrigues, 2015, p. 1628). In addition, Chuang and Lin (2017) found a significant impact between customer relationship performance and organizational performance (Chuang and Lin, 2017). As a result, it can be said that one of the strongest predictors of financial performance is the scope of customer analysis. (Tomczyk, Doligalski and Zaborek, 2016, p. 3652). According to Grissemann et al., customer focus has more impact on financial and non-financial performance indicators compared to innovation and innovation behavior (Grissemann et al., 2013, p. 347). Marketing orientation has also a significant impact on business performance, sales, profit, return on investment (ROI) and return on sales (ROS) (Šályová et al., 2015, p. 626). In addition, marketing actions such as product branding and sales promotion affect organizational performance (Ajagbe et al., 2014, p. 164). Marketing expenditure for sales and perk expenditure used to motivate employees also positively affect the companies' active market value (Cheng et al., 2018). In another study, it was found that marketing expenditures had a significant effect on sales performance of companies (Candemir and Zalluhoglu, 2011, p. 297; Öztürk and Dülgeroğlu, 2016, p. 144). As a result, according to the literature, marketing expenditures have a positive effect on business performance. The findings obtained in this study are in parallel with the literature. According to the results of Granger causality analysis of this study, marketing expenditures positively affect net profit and profit per share. In addition, the effect of net profit and profit per share variables on marketing expenditures is significant and positive. In other words, there is a bidirectional causal relationship between these variables.

6. Conclusion

Marketing is the gateway of companies to consumers. Therefore, marketing expenditures should be spent in order to understand the consumers and to respond to their wishes and needs. Because the understanding of the consumers and the message or communication channel to which these consumers are reached is an important marketing expenditure output. The investment made to obtain these outputs is an important financial burden for companies. However, it is more important for decision-makers whether this burden incurred by companies brings more profit. Therefore, in this study, the effect of marketing expenditures made by insurance companies on company performance was analyzed. As a result, it has been found that the marketing expenditures made by companies are a significant gain gateway for companies. Because the increase in marketing expenditures is a reason for profitability for companies. In addition, the increase in marketing expenditures also leads to an increase in profit per share. This situation allows companies to find investors more easily. Because investors want to make more profit. As a result, it is recommended that company managers allocate more resources for marketing expenditures in terms of their profitability.

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In the study, analysis was made considering the market leader. Because other companies are either not listed on the PDP or the company data is missing. Therefore, other companies have been neglected. This is a limitation in terms of study or paper. However, it is an opportunity for future studies. Because in a sector where more data is available, it is recommended to apply panel time series analysis by considering more companies. In addition, due to cultural influences, taking into account the companies in different geographies may give a different perspective to the literature.

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