

Strategic business decision making: the use and relevance of marketing metrics and knowledge management

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Abstract

Purpose – The purpose of this paper is to investigate the perception of marketing managers in a transition country Montenegro with regards to marketing metrics. The paper examines the degree in which managers are familiar with the way marketing metrics are applied and how important they are in the process of making business decisions in a company operating in a Montenegro.

Design/methodology/approach – Data was collected during 2020 through a survey of 171 randomly selected companies and was analyzed using structural equation model and the statistical method of analysis of variance tests.

Findings – The obtained results show that managers are quite familiar with financial and non-financial metrics. Both groups are applied to a significant degree, as managers believe that these indicators provide valuable information needed during the decision-making process. Still, more emphasis is placed on the knowledge, implementation and importance of non-financial metrics compared to financial metrics. This is probably due to the specificities of the economic activities of the companies operating in Montenegro, as most of them are service companies, which is why non-financial metrics (such as consumer metrics) are the most important indicators when it comes to ascertaining the market position of the company. Additionally, in recent years the primary focus in Montenegro, as country that is still in the process of transformation from planned economy to a free-market form, has been placed on strengthening of competitiveness and advancing the market orientation of companies. This led to an increase in the importance that managers in transition countries attach to non-financial metrics.

Research limitations/implications – The fact that the survey only covers companies from one country is its limitation.

Practical implications – The obtained results will have a significant empirical contribution, which is reflected in providing guidelines for managers on how to improve the system of measuring and controlling marketing performance, all that to strengthen the competitiveness of the company, and can serve managers of hierarchy levels in a company as guidelines for making decisions on the implementation of marketing strategy and marketing metrics, to improve business performance, multi-context customer interaction, cost-saving and strengthen competitiveness.

Social implications – Obtaining necessary knowledge management and implementing marketing metrics are important conditions for consideration when it comes to the continuous monitoring and improvement of business results, increasing competitiveness and advancing the market position of the company.

Originality/value – The originality stems from the analysis of the interconnection that exists between marketing metrics and strategic decision-making, which is expected to be positively reflected in the development of society, i.e. strengthening the competitiveness of companies based on knowledge management achieved through the assessment of the degree of knowledge, the implementation and the significance of each of the metrics covered within this research in business decision-making processes. The paper provides insights into the extent to which managers understand the meaning of these indicators and are able to combine different marketing metrics to obtain more complex indicators, serving as necessary inputs when making strategic business decisions.

Keywords Performance measurement, Transition economy, Knowledge management, Decision, Marketing metrics

Paper type Research paper

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1. Introduction

Strong competition and frequent market changes suggest a need for continuous research into knowledge management and precise assessment of marketing performances (Järvinen and Karjaluoto, 2015; O'Sullivan and Abela, 2007; Clark *et al.*, 2005; Clark, 1999; Herremans and Ryans, 1995). The aim to strengthen the competitive position of the company requires from marketing managers to improve their knowledge and skills needed in quantifying and accurately expressing the results of all business segments i.e. the performances of every department of a company (Di Gregorio *et al.*, 2019; Zack *et al.*, 2009). Therefore, knowledge and the implementation of appropriate marketing metrics are necessary prerequisites for the continuous monitoring of the achieved results, facilitates prudent business decision-making and enables companies to control important business processes, as well as the timely undertaking of the corrective activities necessary to achieve the planned business goals. Developing an effective business strategy based on precise measurements of marketing performance improves the efficiency of the company and leads to the achievement of planned goals (Faridyahyaie *et al.*, 2012; Goldoni and Oliveira, 2010). Hence, strategic business decisions, as decisions that define long-term business orientation of a company and are made to implement the overall corporate strategy, should be made considering the detailed information about the market and competitors. It can be achieved through the implementation of various groups of marketing metrics (Milichovský, 2015; Milichovsky and Simberova, 2015; Nexhipi, 2014). The appropriate selection of marketing metrics serves as a basis for effective strategic decision-making in a company, as implementation of an adequate set of performance indicators allows a business to better define, control and achieve long-term business goals (Milichovský, 2015). Marketing metrics can be considered to be a group of indicators that serve to measure different aspects of companies' performance, expressed in quantitative and qualitative form, allowing managers to monitor their achievement of business objectives (Solcansky *et al.*, 2011; Kottler and Keller, 2007; Ambler *et al.*, 2001). Marketing metrics allow marketing managers to quantify, compare and interpret their results (Solcansky *et al.*, 2011). The quantitative indicators necessary for making adequate business decisions are partially obtained as a result of the adequate marketing metrics implementation. The characteristics of the business goals established and the nature of the company's activities determine the types of metrics that should be applied. Academic literature enlists various groups of metrics but, in practice, however, most of them are usually classified into the following two groups: financial and non-financial (Mintz and Currim, 2013; Petersen *et al.*, 2009). Non-financial metrics provide insights into the overall view of companies' operations that cannot be expressed in financial terms while financial metrics enable the results achieved to be presented in a monetary form (Solcansky *et al.*, 2011).

Stemming from the fact that the performance of different sectors of a company can be assessed through their financial contributions to the company's overall results, marketing metrics offer a reliable way of demonstrating their contributions when it comes to achieving desired business performance (Grbac and Meler, 2010). The marketing metrics application not only simplifies the process of performance measurement (De Ruyter and Wetzels, 2000) but also allows comparisons to be made between the company's results across different time periods (Bennett, 2007; Hacıoglu and Gök, 2013).

The application of the appropriate marketing metrics is especially important for the companies that operate in so-called transition economies. Transition economies are considered countries that are characterized by transformation from completely planned economy to a freer market form. Although most of the countries have started the transition process since 1970s (Kovacic, 1997), it still continues, whereby the achieved results of the transition notably vary across countries (Grimalda *et al.*, 2010). This process has imposed significantly different market conditions, which required the adjustment of companies in every type of economic activity (Griffith *et al.*, 2012). Transition to a freer market has created

turbulent environment characterized by dynamic changes of legal and economic framework, transformation of ownership structure and rapid strengthening of foreign competition (Roth and Kostova, 2003; Lengyel and Rechner, 2013; Svetličič and Kunčič, 2013). This imposed the strengthening of competitiveness of domestic firms as a main condition for existence on the market (Zinnes *et al.*, 2001; Lengyel and Rechner, 2013; Svetličič and Kunčič, 2013). Hence, more accurate measurement of business performances and deeper insight into market and financial position of the companies emphasize the significance of marketing metrics application on a regular basis. The application of marketing metrics in transition economies is especially important because they enable measurement of the overall business performances and the insight of companies' competitiveness. Additionally, it enables measurement of the efficiency of each department of the company and provide a detail overview of effectiveness of each type of company's operation. The application of marketing metrics on a regular basis also allows comparison of current business performances with those achieved in previous years and with those accomplished by competitors. Finally, their application should be viewed as an integral part of corporate strategy that influence the overall competitiveness of a company through enabling decision-making based on precise and accurate information. However, the implementation of financial and non-financial marketing metrics are supposed to be equally represented when making strategic business decisions in a company, considering the fact that these two groups of metrics involve different indicators of business performance. Non-financial metrics application is needed for the analysis of companies' relationship with customers and the values of these indicators are consequence of consumers' attitudes and beliefs regarding the given company and its products. Unlike non-financial, the financial marketing metrics mostly involve indicators related to company's cash flow, which is in a certain way a consequence of its relation with customers (Sampaio *et al.*, 2011; Farris *et al.*, 2006).

Despite the importance that application of marketing metrics has for companies in transition economies, according to the authors' knowledge, there are only a few studies dealing with this issue and most of them have not been done in recent times. Previous studies have mostly focused on assessing the role that marketing metrics play when measuring the achieved results of marketing functions within the company (Melovic *et al.*, 2020; Milichovský, 2015; Šalkovska and Ogsta, 2014; Sampaio *et al.*, 2011) or identifying the extent to which their implementation depends on the specificities of the marketing orientation of the company and the nature of the market in which it operates (Nexhipi, 2014; Farley *et al.*, 2008; Ambler and Xiucun, 2003). However, previous research have neither discovered, which factors prevent more rigorous applications of marketing metrics in the strategic decision-making process at an enterprise level, nor the extent to which company's characteristics, such as size, activity and ownership structure, affect marketing metrics' degree of implementation. This issue has been insufficiently researched even in developed countries (Hacioglu and Gök, 2013; Zahay and Griffin, 2010; Seggie *et al.*, 2006; Gupta and Zeithaml, 2006; Barwise and Farley, 2004), but it is especially prevalent in transition economies, which served as one of the main motives for this study. Previous research conducted in transition economies have also only investigated the level of knowledge or level of implementation of marketing metrics (Cvitanovic, 2018; Šalkovska and Ogsta, 2014; Farley *et al.*, 2008). However, it did neither provide a comprehensive analysis on how the knowledge of marketing metrics affects the level of their application in the decision-making process nor to what extent these indicators are considered important by marketing managers, for making the strategic business decisions. Understanding of these concepts is of key importance for making business decisions based on precise indicators of current market position of a company and strengthening its competitiveness.

Considering the evident research gap, alongside the significance of marketing metrics' application with regards to the improvement of knowledge management and strengthening of the competitive position of companies, this study examines degrees of knowledge and

the importance of marketing metrics in the decision-making process of companies operating in Montenegro, as a transition economy. Additionally, this paper aims to determine whether the intensity of marketing metrics implementation depends on the size and ownership structure of the company. It is expected to develop a conceptual framework that offers broader insights into the role and importance of marketing metrics when managers in Montenegro make strategic business decisions. Therefore, it will indicate, which marketing metrics, in accordance with the theoretical postulates, should be more represented in the strategic business decision-making process, to strengthen knowledge management in companies operating in transition countries. Additionally, this research aims to reveal the direction in which managers in transition economies need to spread their knowledge regarding marketing metric implementation as a basis for more accurate and precise business performance measurement.

The paper consists of five sections. The introduction presents contextual base of the research and its expected contribution. The second section enlists the main findings of the existing literature regarding marketing metrics and identifies the scholarly literature in which the motive for this research can be found. The third segment of the paper refers to materials and methods, including a conceptual framework and an explanation of the applied methodology. The research results and their validation are provided in the fourth section and the final section contains a discussion of the results obtained, highlighting the main theoretical and practical implications of findings. It also presents the main limitations of the study and provides recommendations that may serve as motivation for further researchers in the field.

2. Literature review

2.1 Theoretical background

Marketing metrics have been recognized as prerequisite to making timely business decisions and measuring marketing performance (Seggie *et al.*, 2006). Their implementation enables more precise direction of business activities, achieving higher levels of effectiveness and efficiency in terms of both market function and the company as a whole (Zahay and Griffin, 2010). This is especially important in markets with strong competition, if we keep in mind that, according to existing research, the companies that use these indicators in the decision-making process accomplish more return on their assets compared to those which do not consider them important (Pauwels, 2015). Zinkhan and Verbrugge (2000), in their special issue, discussed the interface between marketing and finance, suggesting that these two departments analyze business performances viewed through the prism of relationship with different stakeholders, which implies usage of diverse groups of marketing metrics. While financial managers examine expectation of future cash flow, thus focusing on financial marketing metrics (such as financial ratios, debt levels, sales, profits and market share), marketing managers estimate business effectiveness through analysis of societal and behavioral issues derived from relationship with customers, thus preferring non-financial marketing metrics (such as customer attitudes, perceptions and behaviors). Hence, the application of both groups of marketing metrics is of equal importance for precise estimation of business performances. Edeling *et al.* (2020) also confirmed the importance of marketing metrics application and identified and synthesized key emerging research areas in which their usage is especially important. Companies need a new aspect of measurement, which is based on productivity and responsibility and the key to the development of marketing function in this new dimension is the implementation of marketing metrics and the development of dynamic competences based on their results (Petrillo *et al.*, 2019). The precise presentation of the financial results of the marketing function constitutes the basis of the modern way of doing business, which means that marketing metrics are considered foundational when it comes to determining the market position of the company and, subsequently, making business decisions.

Unlike the modern approach, which makes marketing metrics an essential tool with which to measure company performance, the traditional approach implies that company performance can be reliably measured based on the application of a smaller number of selected metrics (Ambler and Roberts, 2008). However, modern business environments require more accurate evaluations of business performances, which assumes the use of a significantly larger number of marketing metrics. A lot of them are known in scholarly literature. These are grouped into categories, namely, financial metrics, market metrics, product-related metrics, price-related metrics, sales and distribution metrics, promotion metrics and consumer-related metrics (Grbac and Meler, 2010; Farris *et al.*, 2014; Solcansky *et al.*, 2011; Faridyahyaie *et al.*, 2012; Eusebio *et al.*, 2006). Previous research shows that the implementation of these indicators in a particular company depends on various determinants, including the company's size, its ownership structure, the market structure in which it operates, the nature of its activity and its organizational culture. Research conducted by Ling-Yee (2011) has shown that more market-oriented companies tend to use non-financial marketing metrics while the implementation of financial ones is more prominent in companies that are focused on achieving efficiency. However, it should be noted that most managers still consider financial marketing metrics to be more reliable indicators when making business decisions (Solcansky *et al.*, 2011; Mintz and Currim, 2013). We should bear in mind that non-financial marketing metrics (especially consumer metrics) reveal the company's connection with its consumers and provide more reliable guidelines with which to create an adequate business strategy, ultimately leading to better financial performance, and thus, better financial metrics (Izakova *et al.*, 2017; Gupta and Zeithaml, 2006). The implementation of consumer metrics, non-financially, is of great importance to the accurate assessment of the competitiveness and market power of companies, including those that sell homogenous products (Parcheta, 2016). Research shows that, within non-financial marketing metrics, managers have found the following factors to be the most important: customer retention, customer lifetime value, customer satisfaction, number of consumers/customers, return from consumer and brand value. In regard to financial marketing metrics, the following most commonly used factors are: sales volume, profitability, market growth, contribution margin and other related terms (Moorman and Day, 2016; Mintz and Currim, 2015; Hacıoglu and Gök, 2013; Solcansky *et al.*, 2011; Davidson, 1999; Morgan and Rego, 2006).

Although managers prefer to think of the application of financial metrics as the most reliable tool when evaluating marketing performance (Mintz *et al.*, 2020; Kosan, 2014; Frösén *et al.*, 2008), a study conducted by Gaskill and Winzar (2013) indicates that non-financial metrics, especially consumer metrics, are the most precise indicators when it comes to assessing the overall performance of marketing functions. Gupta and Zeithaml (2006) came to similar conclusions in their research, pointing out that consumer metrics are one of the most important indicators of company profitability. These results are confirmed by research conducted by Schulze *et al.* (2012), Ambler *et al.* (2004) and Kipesha (2013). On the other hand, research conducted in Great Britain by O'Sullivan (2007) shows that financial marketing metrics are still the most important and most widely used when assessing marketing performance while consumer metrics are in second place. The same conclusions were reached in research by Frösén *et al.* (2008) and Hacıoglu and Gök (2013).

However, the significance and degree of application of individual groups of marketing metrics differs significantly from country to country. Therefore, in a comparative analysis of five countries (USA, Germany, Japan, Great Britain and France), authors Barwise and Farley (2004) came to the conclusion that marketing metrics in Japan are generally applied to a significantly lesser extent than in other observed countries and that product metrics were the most important. Unlike Japan, the use of marketing metrics is especially important in developed European countries (Germany, Great Britain and France), in which financial ones are the most important. In the USA, both groups of metrics are equally represented. Managers in these countries share the unique view that, in the future, the application of

non-financial marketing metrics should be much more represented when making strategic business decisions (Barwise and Farley, 2004).

Observable differences regarding the intensity of the application of individual marketing metrics are also indicated in the study of Hacıoglu and Gök (2013), which included six countries (Turkey, Great Britain, Ireland, Spain, China and Nigeria). The results of this research show that consumer and basic financial metrics are predominantly used in Turkey while, in Great Britain and Ireland, preference is given to the application of financial metrics when making business decisions. In contrast, to these countries, both groups of metrics are equally represented in the decision-making process of companies operating in Spain, China and Nigeria. This study also confirmed that the implementation of the given indicators in strategic business decision-making is an essential element in European countries (Hacıoglu and Gök, 2013). The same results regarding the degree of use of these two groups of metrics were reached by Ambler and Xiucun (2003) in a comparative analysis of China and Great Britain.

However, marketing metrics' implementation is determined by internal and external characteristics, whereas the company size, the structure of its ownership and market turbulence are of the greatest importance (Ling-Yee, 2011; Mintz and Currim, 2013). Research by O'Sullivan (2007) and Brooks and Simkin (2011) has confirmed that the relevance and frequency of implementing metrics in the strategic decision-making process increases in parallel with the growth of the company. Alongside this, it is influenced by the ownership structure. These techniques are, thus, more frequently applied in companies in which private capital is prevalent. Such companies are market-oriented to a greater extent than public-owned enterprises (Farley *et al.*, 2008). However, contrary to the conclusions of O'Sullivan (2007), a study of Frösén *et al.* (2008) shows that the intensity of the implementation of marketing metrics is higher in companies with public-owned capital. The authors also point out that, for companies that sell business-to-customer (B2C) goods, slightly more importance is given to non-financial marketing metrics – especially consumer metrics. For those that sell business-to-business (B2B) goods, priority is given to financial indicators. Their importance with regard to strategic decision-making increases significantly along with increasing levels of market turbulence (Frösén *et al.*, 2008).

The results of research by Ambler and Roberts (2008) show that perceptions of managers regarding the extent to which marketing metrics should be used in strategic decision-making is also determined by the characteristics of the department that they manage. Additionally, the choice of marketing metrics used in a strategic decision-making is also influenced by the nature of the company's business activity (Milichovsky and Simberova, 2015).

2.2 The application of marketing metrics in transition countries

Unlike in developed countries, the extent to which managers from transition economies know and use marketing metrics is not sufficiently investigated. Previous research revealed that companies that operate in transition countries mostly use simple metrics that neither require large databases nor application of complex methods for their calculation (Ambler and Xiucun, 2003; Nexhipi, 2014). The usage of complex marketing metrics is evident only in large companies (Sampaio *et al.*, 2011), which can be explained by the fact that these companies have larger databases, more experienced managers and more complex organizational structure, which implies the need for application of greater number of indicators of various business performances. However, the financial and non-financial marketing metrics do not have equal importance in these countries. While financial metrics are mostly used in countries such as Latvia and Czech Republic, in other countries such as China and Vietnam, marketing managers mostly rely on non-financial metrics as indicators of business performance. The non-financial marketing metrics are usually preferred by companies that operate within specific cultural norms that imply stronger customer

orientation, which is the reason why companies that operate in such circumstances mostly implement customer and brand metrics (Farley *et al.*, 2008; Ambler and Xiucun, 2003). Also, the nature of the economic activity of companies determines whether financial or non-financial metrics will be preferred. While manufacturing companies apply both groups of these indicators, service companies mostly rely on non-financial metrics, especially brand and customer metrics (Sampaio *et al.*, 2011; Farley *et al.*, 2008). However, the research in transition economies also reveal that managers understand the importance of marketing metrics application on regular basis, especially in the markets with strong foreign competition (Farley *et al.*, 2008).

Amongst the transition economies, the smallest number of research on this topic have been conducted in region Balkan countries. According to the authors' knowledge, the research related to marketing metrics were conducted in Croatia, Bosnia and Herzegovina and Serbia and these research revealed that managers in these countries mostly use simple financial metrics, despite the strong foreign competition, which is characteristic of these markets. The possible reason for that stems from the fact that marketing managers in these countries often do not have specific knowledge needed for implementation of wider range of marketing metrics such as those related to finance and accounting (Cvitanovic, 2018). This kind of knowledge is needed to facilitate the accurate measurement of marketing activities. The lack of knowledge in this regard is particularly evident in domestic companies. However, in branches of foreign companies, this obstacle is far less pronounced, as managers from these companies organize training for their employees to overcome this problem (Cvitanovic, 2018).

Similarly to the previous research in transition economies, the results of a research of Kurtović *et al.* (2010) revealed that in Western Balkan countries financial and market metrics are more frequently used than non-financial ones. Besides of that, only few companies analyzed on a regular basis the influence that applied marketing strategy of a company had on the consumers' perception using relevant marketing metrics (Kurtović *et al.*, 2010), despite the fact that implementation of these indicators is a necessary condition for accurate measurement and continuous monitoring of the company's competitive position on the market (Brooks and Simkin, 2011). The importance of applying these metrics is particularly expressed by companies from transition countries, as they are faced with strong foreign competition. Strengthening their market position is, thus, a necessary condition for their survival and further growth. Despite that fact, the previous research conducted in the transition economies (especially in Balkan countries) investigated only the extent to which managers are familiar with marketing metrics and the level of their implementation but failed to provide a deeper understanding how the knowledge of marketing metrics actually influences the level of their application in the decision-making process. Also, the previous research failed to explain to a what extent these indicators are considered important by marketing managers, for making the strategic business decisions that are of key importance for companies' positioning on the market and strengthening their competitiveness. Filling in this gap is very important as greater implementation of marketing metrics would reveal to managers the key shortcomings of business strategies and directions in which to improve future marketing activities. As the application of marketing metrics is determined by several characteristics of a company, among which its size and ownership structure stand out, this research covers micro, small, medium and large companies with different ownership capital structures. The explanation of the methodology applied in this research and the results obtained are given in the following sections.

2.3 Hypotheses and conceptual model developing

Strengthening the market orientation and competitiveness of companies in transition countries is one of the goals pertaining to furthering the economic development of these countries. In this sense, marketing metrics can be viewed as tools enabling managers to

precisely analyze the existing market position of a company – a set of instruments providing the prerequisite information base for creating effective marketing strategies and achieving better performance across the company as a whole. The authors consulted prior studies on this topic with the aim to consider the most relevant factors, which determine the application of marketing metrics in enterprises operating in transition economies. Several of them are listed in [Table 1](#).

Considering the findings of previous research and the literature gap identified, the research hypotheses are formulated. Keeping in mind the importance of understanding marketing metrics ([O'Sullivan, 2007](#); [Mintz and Currim, 2013](#); [Sampaio et al., 2011](#)) and the prerequisites of metric implementation for strategic business decision-making processes, the research hypotheses are given as follows:

- H1.* Montenegrin managers possess high degrees of comprehension with regards to financial marketing metrics.

Table 1 Previous research underpinning the conceptual model of research

References	Sample	Methodology	Object of research
Gladson Nwokah, 2009	63 randomly selected food and beverage organizations in Nigeria	Regression analysis	Influence of the application of marketing metrics on customer focus, competitor focus and the marketing performance of companies
Ling-Yee, 2011	209 randomly selected manufacturing firms from Hong Kong – China	Multiple and hierarchical regression analysis	Impact of customer value-based organizational culture and processes on company's use of marketing metrics
Hacioglu and Gök, 2013	145 Turkish companies listed in Istanbul Chamber of Industry's annual list	The exploratory factor analysis (EFA)	Degree to which marketing metrics are used in Turkish companies
O'Sullivan, 2007	209 marketing managers from Irish companies	Time-trend extrapolation and descriptive statistics	Measurement of the marketing performance of Irish companies
Faridyahyaie et al., 2012	75 marketing managers in industrial units from East Azerbaijan	T-test and descriptive statistics	Identification of marketing effectiveness metrics in industrial units
Bennett, 2007	750 top charity organizations from the UK Charity Commission	T-test and descriptive statistics	Identification of the marketing metrics, which most influenced business results
Bendle et al., 2010	194 senior marketing managers from the USA	Descriptive statistics	Metrics that managers consider to be the most important when managing their business
Eusebio et al., 2006	500 managers from 71 tourism and hospitality companies in Spain	T-test	Measures used to measure marketing performance
Farley et al., 2008	Managers from 200 different strategic business units in 76 companies in Vietnam	Multiple regression and descriptive statistics	Correlation between firm characteristics, metric use and various performance indicators
Kurtović et al., 2010	200 companies from Serbia, Croatia and Bosnia and Herzegovina	T-test and descriptive statistics	Measurement of marketing performance
Zahay and Griffin, 2010	209 B2B service companies	EFA	The relationship between customer-based performance measures and business growth performance
Ambler and Xiucun, 2003	500 managers in 154 companies from China and UK	T-test and descriptive statistics	Assessment of business performance using marketing metrics
Frösén et al., 2008	1,119 Finnish companies	EFA and descriptive statistics	The connection between top management orientation and the metrics used
Mintz and Currim, 2013	1,287 marketing-mix activities reported by 439 US managers	Seemingly unrelated regression	What drives managerial use of marketing and financial metrics
Mintz and Currim, 2013	22 qualitative interviews with managers from the USA	Regression analysis	Impact of marketing metrics use on marketing performance

H2. Montenegrin managers possess high degrees of comprehension with regards to non-financial marketing metrics.

To strengthen the competitiveness of a company, it is necessary to apply a number of marketing metrics (Barwise and Farley, 2004; Hacıoglu and Gök, 2013; Kipesha, 2013) with the aim to provide guidance to managers in the process of creating business strategies. Considering the fact that knowledge of wider range of marketing metrics is prerequisite to their use in the strategic decision-making, the authors developed the following hypotheses:

H3. The higher the extent of comprehension of financial marketing metrics, the higher the level of their use in companies operating in Montenegro.

H4. The higher the extent of comprehension of non-financial marketing metrics, the higher the level of their use in the strategic decision-making in companies operating in Montenegro.

As the extent to which marketing metrics are used may be different, questions arise as to whether or not managers consider them sufficiently reliable and accurate indicators (Barwise and Farley, 2004; Kipesha, 2013; Cvitanovic, 2018; Kurtović *et al.*, 2010), based on which business decisions can be adequately made. According to these considerations, the following hypotheses were formulated:

H5. Financial marketing metrics are of great importance for making strategic business decisions in companies operating in Montenegro.

H6. Non-financial marketing metrics are of great importance for making strategic business decisions in companies operating in Montenegro.

The application of marketing metrics is determined by various internal and external factors, among which the size of the company stands out as one of the most important (O'Sullivan, 2007; Brooks and Simkin, 2011; Ling-Yee, 2011). Considering the conclusions of prior studies based on the sample of companies from developed countries, which show that the importance and degree of marketing metric implementation in the strategic decision-making process of a company increases with its growth, the following hypothesis was formed:

H7. Company size significantly influences the extent to which marketing metrics are implemented in Montenegrin companies.

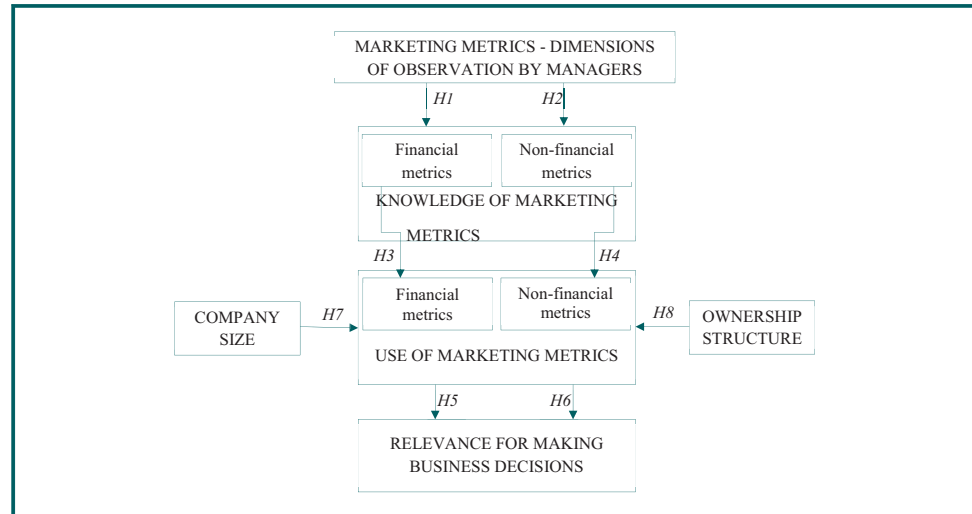
The results of previous research have highlighted the impact of the ownership structure of capital on the extent to which marketing metrics are implemented in companies (O'Sullivan, 2007; Brooks and Simkin, 2011; Ling-Yee, 2011). However, there is no consensus on whether the extent to which marketing metrics are applied in a company operating in a transition country depends on the ratio of domestic and foreign capital in that company. Therefore, the following hypothesis was formulated:

H8. The ownership structure influences the implementation of marketing metrics in companies operating in Montenegro.

Considering the goals of the research and the formulated hypothesis, the authors constructed a conceptual model, which is given in Figure 1.

The given model involves 24 selected metrics including financial metrics, consumer metrics and market metrics, wherein consumer metrics are considered non-financial and market metrics are classified as financial, in accordance with the practices of previous research (Milichovsky and Simberova, 2015; Milichovský, 2015; Bendle *et al.*, 2010; Sampayo *et al.*, 2011). For each of these groups of metrics, using the structural equation model (SEM), we assessed the extent to which managers know these metrics and whether managerial knowledge has an effect on the extent to which they are implemented and considered important to decision-making. The results of previous research (Mintz and Currim, 2013; Ling-Yee, 2011; O'Sullivan, 2007; Brooks and Simkin, 2011; Frösén *et al.*, 2008) have

Figure 1 Conceptual research model



revealed the impact of a company's size and ownership structure on the extent to which marketing metrics are applied. Thus, the second part of the model involves the evaluation of the influence that these two variables have on the application of selected metrics in companies operating in the observed transition country, using the statistical method of analysis of variance (ANOVA) test. In this way, the model facilitates a depiction of the differences that exist regarding the level of knowledge, the level of application, and the extent to which selected metrics are considered important, depending on whether they belong to the financial or non-financial group, with ownership structure and the size of the company identified as factors that have a great impact on this.

3. Methodology and sample

Empirical online survey was conducted in February 2020 and it involved companies that operate in Montenegro, as a transition economy. The reasons behind this choice of country are multiple. This is a country that has not yet completed the transition process, as a process of transformation from planned economy to a freer market form. This poses a number of challenges for companies operating in the Montenegrin market. Montenegro is an open economy, which suggests the need to strengthen the competitiveness of domestic companies. This is especially important if we take into account the fact that there are very few companies that are export-oriented. Thus, the strengthening of competitiveness is considered necessary to the further survival and development of the aforementioned companies. However, despite this, according to the authors, so far no research dealing with the issue of knowledge and the implementation of marketing metrics, as well as their importance for making business decisions, has been conducted in Montenegro.

The sample consists of 171 randomly selected micro, small, medium and large companies, which were classified based on the European criteria (European Commission, 2021). The reason behind this random sample stems from the fact that, so far, no research dealing with this issue has been conducted in Montenegro, and therefore, there were no indicators to show that the sample should pay special attention to the representation of companies with specific characteristics such as size, activity, ownership structures, etc. Hence, the method of random sampling was considered reliable enough when assessing the extent to which marketing metrics are applied in Montenegro.

Small, medium and large companies were almost equally represented in the survey (25.73%, 32.16% and 35.09%, respectively) while the representation of micro-enterprises in the sample was slightly lower (7.02%). The representation of micro-enterprises was lower due to the fact that, according to previously conducted research on this issue in other countries, companies in this category do not have demarcated individual departments, and thus, a developed marketing sector. They, therefore, do not need to apply marketing metrics, especially if they require additional knowledge and skills, as this puts pressure on their budget. Thus, it can be concluded that the given sample is reliable, considering the fact that it consists of firms placed in all three regions of the country (northern, central and southern regions) and that it involves almost equal representations of small, medium and large companies. Additionally, this sampling procedure is in line with other research conducted in other transition countries (Milichovský, 2015; Milichovsky and Simberova, 2015; Ambler and Xiucun, 2003). Respondents from the sample predominantly belonged to the middle level of management (47.37% of respondents) and the smallest number of respondents were from the top management of their company (16.37%). According to the structure of equity, the companies in the sample mostly had a dominant share of domestic capital (60.82%) while 39.18% were companies with a dominant share of foreign capital. A more detailed description of the properties of companies included in the survey are presented in Table 2.

Considering the previous research and the experience of the authors, a questionnaire consisting of 11 questions was created. It contained multiple-choice questions and questions for measuring attitudes using a five-point Likert scale. The survey involved 24 marketing metrics (which can be seen in Table 3). Considering the fact that this is the first in-depth piece of research regarding this issue conducted in Montenegro, the choice of metrics was based on the findings of earlier research in the field conducted in other countries. Hence, the most used marketing metrics were selected. Also, when selecting marketing metrics, the authors attempted to choose those whose calculation did neither imply complex methodology implementation, nor large databases. The selected marketing metrics were divided into two groups. The first one consisted of consumer metrics, which showed the extent to which the company cared about customers and considered them the most important stakeholders. The second group consisted of financial and market metrics that are used for the analysis of financial and market position of the company. The chosen metrics are listed below in Table 3.

The survey, thus, included the 12 most commonly used financial and 12 most frequently applied non-financial metrics, according to research by Kurtović *et al.* (2010);

Table 2 Characteristics of companies in the research sample

	<i>N</i>	<i>Weighted%</i>		<i>N</i>	<i>Weighted%</i>
Number of employees			Position of respondents in the company		
Up to 9	12	7.02	Top management	28	16.37
10–49	44	25.73	Middle management	81	47.37
50–250	55	32.16	Lower management	62	36.26
More than 250	60	35.09	–	–	–
Ownership structure			Number of years, as the company was founded		
Domestic capital	104	60.82	Less than 5 years	14	8.19
Foreign capital	67	39.18	5–15 years	62	36.26
–	–	–	More than 15 years	95	55.56
Frequency of application of marketing metrics			Number of years applying marketing metrics		
Per year	23	13.45	I don't know/I am not familiar with it	8	4.67
Semi annually	12	7.02	Up to a year	26	15.20
Quarterly	38	22.22	1 to 3 years	30	17.54
Monthly	76	44.44	3 to 5 years	37	21.64
Never	22	12.87	More than 5 years	70	40.94

Table 3 Financial and non-financial metrics used in the research

<i>Non-financial metrics</i>	<i>Financial metrics</i>
Number of consumers/clients	Sales volume
Consumer/client structure	Profitability
Consumer/customer satisfaction	ROI (return on investment)
Consumer/customer complaints	ROMI (return on marketing Investment)
Consumer/customer loyalty	ROS (return on sales)
Consumers/customers' expectations	Marketing cost
Consumer/client recommendations	Marketing cost per unit
Customer retention rate	Long-term investment effects
Customer churn rate	Market share
Customer lifetime value	Market growth
The expected time value of the potential consumer	Availability of services
Consumer return	Contribution margin

Faridyahyaie *et al.* (2012); Ambler (2004); Bennett (2007); and Solcansky *et al.* (2011). The selection of these types of metrics is especially significant with regards to markets of transition countries, wherein the concept of marketing is usually less developed. The questions from the questionnaire were divided into three sections. The first group contained questions, which sought to determine the levels of knowledge of decision-makers from marketing sectors with regards to selected marketing metrics, as a prerequisite for their application, which was also the subject of research by Sampaio *et al.* (2011) and Cvitanovic (2018). The level of knowledge was assessed using five-point Likert scale, wherein a score of 1 indicated the lowest and the Grade 5 the highest level of familiarity with the aforementioned metrics. The questions from the next part of the questionnaire pertained to the application of these metrics as reliable pointer of the performance of the company, in accordance with previous research by Gao (2010); Kurtović *et al.* (2010); Ambler (2004); and Bennett (2007). Questions from the third segment sought to determine how important marketing metrics were for strategic decision-making process of the companies operating in Montenegro. This is of particular importance when attempting to accomplish business goals and strengthen competitiveness, as pointed out by Raghurir *et al.* (2010); Bennett (2007); Sampaio *et al.* (2011); and Frösén *et al.* (2008). The Likert scale was also used in the last two sections of the questionnaire, wherein a score of 1 indicated the lowest and 5 was the highest level of importance for decision-making.

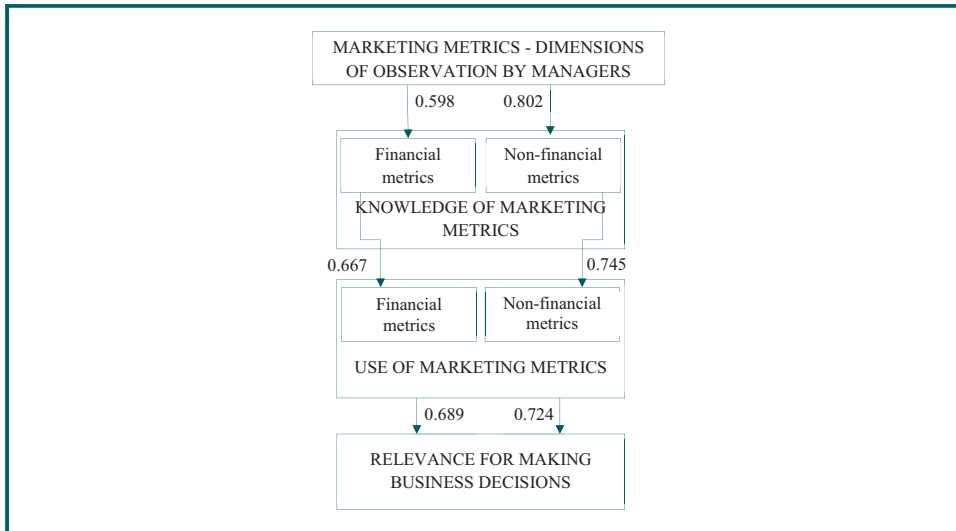
In addition to the above, the questionnaire also contained questions linking the type of companies' business activity with marketing metrics. These questions were related to the ownership structure of the companies, the number of years of doing business, their size and how long they had used the given marketing metrics. The analysis also included a question on whether or not the results of previous research were important when planning future marketing activities. These characteristics have been considered important in previous research by Ling-Yee (2011); O'Sullivan (2007); Brooks and Simkin (2011); Farley *et al.* (2008) and Mintz and Currim (2013).

Empirical data analysis in this study was done using SEM and ANOVA test. SEM model was created using IBM AMOS program while SPSS program was used assessing the ANOVA test. The results obtained are given in the following section.

4. Results

The SEM model applied in this research enabled us to assess the extent of knowledge that managers have regarding marketing metrics and how much managerial knowledge affects the use and perceived importance of these indicators when making strategic business decisions. The results obtained can be found in Figure 2.

Figure 2 SEM results



Based on the estimated values of the regression coefficients using the Maximum Likelihood method, it follows that, from the group of financial metrics, the long-term investment effects (0.861), ROI (0.818), profitability (0.815) and ROMI (0.810) are metrics that managers are most familiar with. The assessment of the level of knowledge of this group of metrics was 0.598. As this value is statistically significant, the first research hypothesis (*H1*) was accepted. The financial marketing metric that managers were the least aware was the availability of services, as the regression coefficient obtained for that metric had the smallest value (0.604). The overall assessment of the degree of knowledge of non-financial metrics is also statistically significant and amounts to 0.802. As such, the second hypothesis (*H2*) is accepted. Additionally, it can be concluded that managers in Montenegrin companies to a greater extent know and apply non-financial marketing metrics than financial ones, as the obtained value of regression coefficient for this group of metrics (0.802) is greater than the one obtained for financial metrics (0.598). The values of regression coefficients of individual marketing metrics, evaluated using the Maximum Likelihood method, show that managers within non-financial metrics are the most familiar with consumer satisfaction (0.858), followed by consumer loyalty (0.816), consumers' return (0.773) and consumers' expectations (0.761). These metrics have the most influence on the assessment of the total degree of knowledge of non-financial marketing metrics. Potential consumer value (0.642), churn rate (0.689) and consumers' structure (0.669) were the non-financial metrics with which managers were the least familiar.

The results of the SEM analysis of the degree of use of marketing metrics shows that their use is significantly influenced by the degree of managerial knowledge. The value of the estimated regression coefficient (0.667) shows that the degree of knowledge of financial metrics affects the level of application. The degree of knowledge of non-financial metrics also affects their level of use. This is concluded based on the value of the obtained regression coefficient (0.745). As both coefficients were statistically significant, the third (*H3*) and fourth (*H4*) hypotheses were confirmed. From the group of financial metrics, managers mostly used the contribution margin (0.918), long-term investment effects (0.905), market growth (0.892) and ROS (0.892), as evidenced by the statistically significant values of their regression coefficients. Unit marketing costs is the financial metrics that managers use the least, as confirmed by the value of the regression coefficient, estimated using the maximum likelihood method (0.781). From the group of non-financial metrics, the

most commonly used were customer retention rate (0.905), churn rate (0.837) and consumer expectations (0.852) while consumer complaints metrics were used the least (0.581).

Testing the fifth and sixth hypotheses was done through the assessment of the relevance of the implementation of metrics covered by the research with regards to making strategic decisions within a company. The obtained values of regression coefficients of the SEM model indicate that market share (0.894) was the most important financial metric, followed by long-term investment effects (0.886) and market growth (0.881). Profitability (0.610) was the least important. From the group of non-financial metrics, customer lifetime value (0.884), customer retention rate (0.875) and consumer recommendations (0.863) were singled out as the most important when decision-making. The overall assessment of the significance of the application of financial metrics was 0.689 and 0.724 of non-financial ones. These values of regression coefficients are statistically significant. As such, the fifth (*H5*) and the sixth hypotheses (*H6*) were accepted.

The reliability of the SEM model was examined using several indices. These indices, along with the critical values obtained for the results of SEM, are given in [Table 4](#).

The test values of indices presented in the table above confirm the validity of the SEM model specification.

Further data analysis sought to examine whether the size of the company and the ownership structure of its capital affected the degree to which marketing metrics would be used. For this purpose, the ANOVA test was used. The first ANOVA test examined whether there was a difference regarding the extent to which marketing metrics were applied as a result of the company's size. This research included four categories of companies (micro, small, medium and large companies) and for these four the sameness of the expected values of variables was tested.

The hypothesis claiming that the expected values of marketing metrics for different size categories of companies involved in the research were the same was tested. The calculated value of F statistics indicated that, for most individually observed variables, it was needed to reject the assumption of similarity in expected values of marketing metrics when measured for companies of a certain size.

The ANOVA test's results can be found below in [Table 5](#) while the detailed overview can be found in [Table A1](#) given in [Appendix 1](#).

As the results obtained suggest ([Table 5](#)), with a risk of error of less than 10%, it is concluded that an exception exists for the rate of lost consumers and the expected time value of a potential consumer, wherein there is equality in the expected values of marketing metrics regardless of the size of the company. With the exception of these two non-financial marketing metrics, the ANOVA test indicated the existence of significant differences regarding the degree of application of marketing metrics (financial and non-financial ones) for companies of different sizes. Considering the given results of the ANOVA test, the seventh research hypothesis (*H7*) was therefore accepted.

Table 4 Goodness of fit (GoF) indices

<i>Gof indices</i>	<i>Criterion guidelines</i>	<i>SEM results – knowledge of metrics</i>	<i>SEM results – use of metrics</i>	<i>SEM results – metrics importance</i>
Chi-Square	>0.05	0.075	0.066	0.06
Root mean square error approximation	<0.1	0.027	0.022	0.024
Normed fit index	>0.9	0.955	0.968	0.952
Comparative fit index	>0.9	0.957	0.963	0.954
Parsimony-adjusted normal fit index	>0.5	0.511	0.511	0.644

Insights into descriptive statistics revealed that the most frequent use of non-financial marketing metrics (i.e. the highest expected value) was in small companies while medium-sized companies most frequently used financial marketing metrics. Lower rates of use of both groups of metrics, i.e. the lowest expected value, most often pertained to micro-companies and large companies.

To test the last research hypothesis (*H8*), the ANOVA test examined whether or not the implementation of marketing metrics was influenced by the ownership of the company, i.e. whether the dominant share of foreign or domestic capital affected the extent to which marketing metrics are applied. The obtained results of the ANOVA test are presented in [Table 5](#) while the detailed overview of the obtained values can be found in [Table A2](#) given in [Appendix 2](#).

The results of this test differed from the answers pertaining to the previous research question. Out of the tested differences for 24 marketing metrics, only 6 of them demonstrated significant differences in their application, depending on the ownership structure, and those differences occur for three non-financial and three financial marketing metric. Out of the group of non-financial marketing metric, the differences are obtained in the application of consumer satisfaction, consumer complaints and the rate of lost consumers. For financial marketing metrics, differences were observed in the application of unit marketing cost, market share and market growth. For all remaining marketing metrics, there appeared to be equal application regardless of the ownership structure of capital, which is why our eighth hypothesis (*H8*) was rejected. After comparing the results of descriptive statistics for marketing metrics whose application depends on ownership structure of the capital, it is concluded that companies in which the private capital is prevalent use non-financial marketing metrics more frequently. On the other hand, the companies in which the foreign capital is prevalent apply financial marketing metrics more often.

5. Discussion

The main findings of this study indicate that Montenegrin managers are familiar with both groups of metrics covered by the research, which is a necessary condition for their respective applications. However, the values of the regression coefficients obtained by the SEM model indicate that the degree of knowledge related to non-financial metrics is higher than that of financial ones. The potential reason for these results stems from the fact that, in transition countries, such as Montenegro, there has been an increased focus on strengthening the competitiveness and market orientation of companies. This increases the role and the importance of non-financial metrics while financial ones could be seen as a consequence of market performance. Although some research ([O'Sullivan and Abela, 2007](#); [Frösén et al., 2008](#); [Kosan, 2014](#)) indicate that financial marketing metrics are the most reliable when it comes to assessing marketing performance, companies from transition countries should focus on the application of non-financial ones considering their need to strengthen market competitiveness. On the other hand, some research indicates that non-financial metrics provide trustworthy information needed for the assessment of the overall business performance of companies ([Hacioglu and Gök, 2013](#); [Gupta and Zeithaml, 2006](#)). These results are encouraging.

As the estimated SEM model revealed, knowledge of marketing metrics affects the extent to which they are used. It is important to point out that financial metrics are applied slightly more frequently than non-financial ones. Similar conclusions were made by [Hacioglu and Gök \(2013\)](#) in their research. However, this difference was not statistically significant. These results contrast the results of previous research conducted in European countries (Germany, UK, France and Ireland), according to which the most commonly used metrics belong to the financial group ([Barwise and Farley, 2004](#); [Hacioglu and Gök, 2013](#)). However, it is worth noting that most of the countries in which the above research was

Table 5 ANOVA test examining differences in the expected values of marketing metrics depending on the company's size/the ownership structure

		<i>F.</i>	<i>Sig. (depending on size)</i>	<i>F.</i>	<i>Sig. (depending on ownership structure)</i>
Number of consumers/clients (NF1)	Between groups	3.117	0.028	0.044	0.834
	Within groups	–	–	–	–
	Total	–	–	–	–
Consumer/client structure (NF2)	Between groups	4.370	0.005	0.737	0.392
	Within groups	–	–	–	–
	Total	–	–	–	–
Consumer/customer satisfaction (F3)	Between groups	5.491	0.001	7.553	0.007
	Within groups	–	–	–	–
	Total	–	–	–	–
Consumer/customer complaints (NF4)	Between groups	9.777	0.000	7.360	0.008
	Within groups	–	–	–	–
	Total	–	–	–	–
Consumer/customer loyalty (NF5)	Between groups	4.829	0.003	0.095	0.759
	Within groups	–	–	–	–
	Total	–	–	–	–
Consumer/customer expectations (NF6)	Between groups	4.713	0.003	2.374	0.125
	Within groups	–	–	–	–
	Total	–	–	–	–
Consumer/client recommendations (NF7)	Between groups	3.653	0.014	0.553	0.458
	Within groups	–	–	–	–
	Total	–	–	–	–
Customer retention rate (NF8)	Between groups	2.541	0.058	0.112	0.738
	Within groups	–	–	–	–
	Total	–	–	–	–
Churn rate (NF9)	Between groups	1.579	0.196	3.976	0.048
	Within groups	–	–	–	–
	Total	–	–	–	–
Expected consumer lifetime value (NF10)	Between groups	2.134	0.098	0.405	0.525
	Within groups	–	–	–	–
	Total	–	–	–	–
The expected time value of the potential consumer (NF11)	Between groups	1.198	0.312	0.085	0.771
	Within groups	–	–	–	–
	Total	–	–	–	–
Consumer return (NF12)	Between groups	2.144	0.097	0.038	0.845
	Within groups	–	–	–	–
	Total	–	–	–	–
Sales volume (F1)	Between groups	2.973	0.033	0.132	0.717
	Within groups	–	–	–	–
	Total	–	–	–	–
Profitability (F2)	Between groups	5.630	0.001	0.353	0.553
	Within groups	–	–	–	–
	Total	–	–	–	–
ROI (F3)	Between groups	2.806	0.041	1.095	0.297
	Within groups	–	–	–	–
	Total	–	–	–	–
ROMI (F4)	Between groups	3.101	0.028	0.181	0.671
	Within groups	–	–	–	–
	Total	–	–	–	–
ROS (F5)	Between groups	3.104	0.028	0.735	0.393
	Within groups	–	–	–	–
	Total	–	–	–	–
Marketing cost (F6)	Between groups	3.504	0.017	1.026	0.313
	Within groups	–	–	–	–
	Total	–	–	–	–

(continued)

Table 5

		F.	Sig. (depending on size)	F.	Sig. (depending on ownership structure)
Unit marketing costs (F7)	Between groups	2.289	0.081	8.254	0.005
	Within groups	–	–	–	–
	Total	–	–	–	–
Long-term investment effects (F8)	Between groups	3.649	0.014	1.525	0.219
	Within groups	–	–	–	–
	Total	–	–	–	–
Market share (F9)	Between groups	4.283	0.006	4.660	0.032
	Within groups	–	–	–	–
	Total	–	–	–	–
Market growth (F10)	Between groups	3.614	0.015	6.388	0.012
	Within groups	–	–	–	–
	Total	–	–	–	–
Availability of services (F11)	Between groups	3.667	0.014	0.769	0.382
	Within groups	–	–	–	–
	Total	–	–	–	–
Contribution margin (F12)	Between groups	3.044	0.031	1.149	0.285
	Within groups	–	–	–	–
	Total	–	–	–	–

conducted are economically developed countries, which indicates that market orientation is at a satisfactory level. As such, the focus is more on retention than on achieving heightened market competitiveness. In recent years, the primary focus has been on increasing competitiveness and advancing the market orientation of companies, leading to an increase in the importance that managers in transition countries attach to non-financial metrics. In addition, to the above, it should be noted that Montenegro is an economy that is predominantly focused on service activities, with a high share of tourism, trade, banking and telecommunications in GDP, justifying more of a focus on non-financial than financial metrics for knowledge and marketing managers. This justifies the results obtained. Furthermore, it should be noted that non-financial ones are of greater importance to B2C goods compared to financial (Frösén *et al.*, 2008), which also supports our results. Non-financial metrics reveal the company's connection with its consumers and this is one of the reasons behind marketing managers' orientation toward this group of metrics. On the other hand, the results pertaining to knowledge and the application of financial metrics in the analyzed market can be justified by the fact that this group of metrics is most frequently used by financial and top managers.

The estimated SEM model also confirmed that managers consider both groups of these indicators important. However, the values of regression coefficients in the evaluated SEM model show that they still attach slightly more importance to non-financial than financial marketing metrics. The obtained results are not surprising, bearing in mind that non-financial metrics are used more, especially considering the previously emphasized importance that these metrics hold for companies operating in Montenegro as a transition economy. These results are similar to conclusions made in the study of Barwise and Farley (2004), who uncovered the attitudes of managers from developed countries, demonstrating that it is needed to pay more attention on the application of non-financial metrics when making business decisions.

The ANOVA test found that the application of marketing metrics included in the research is affected by the company size while the equity structure does not have a significant effect. The biggest user of non-financial metrics was small companies. In medium-sized

companies, financial metrics were mostly used. The least use for both groups of metrics was observed in micro and large companies. These results may be due to the fact that micro-enterprises do not have a well-developed organizational structure or a separate marketing function. On the other hand, large companies often outsource certain marketing activities and/or most of their marketing functions, which could be why managers in these companies are not sufficiently familiar with the degree of use of these metrics – they receive ready-made reports instead.

In view of the structure of equity, differences in degrees of application were observed only for certain types of metrics. When observed in groups, the differences shown are not statistically significant. These results are partly consistent with research by [O'Sullivan \(2007\)](#), [Solcansky et al. \(2011\)](#) and [Brooks and Simkin \(2011\)](#), who point out that the importance and frequency of marketing metric use increases in parallel with the growth of companies. This is in contrast with the research of [Cvitanovic \(2018\)](#), who argued that managers in transition countries do not apply marketing metrics to a great extent. This is especially seen in companies with a dominant share of domestic capital.

The results of the previous analysis show that marketing managers in Montenegro significantly understand and apply marketing metrics, considering them relevant to business decision-making. However, given the importance that the application of marketing metrics has when it comes to the advanced assessment of marketing and the market performance of the company, there is significant room for further instructions for managers not only to better optimize these processes when creating an appropriate marketing strategy but also in accounting and finance. In this way, a more comprehensive picture can be created. Additionally, the results revealed that marketing managers use more often non-financial marketing metrics, compared to financial. This findings are expected because most of the companies that operate in Montenegro are service companies, which is why non-financial metrics are key indicators of their level of competitiveness. However, they mostly use consumers' metrics related to the existing customers of the company such as churn rate, consumers' recommendations and consumers' loyalty, but they do not use to a needed extent metrics related to the attracting of new consumers such as the consumers' structure, consumers' complaints and expected time value of a potential consumer. These results indicate that managers in Montenegro should place more emphasis on attracting new consumers.

6. Conclusion

The knowledge and implementation of appropriate marketing metrics represent a necessary condition for the continuous monitoring of the achieved results and the timely undertaking of necessary corrective activities to accomplish business goals. Therefore, this study analyzes the degrees of knowledge and the implementation, as well as the relevance of selected metrics for strategic business decision-making in Montenegro, as a transition economy. SEM and ANOVA tests were applied in an attempt to analyze the data collected through an online survey. The obtained values of regression coefficients (estimated using the maximum likelihood method) in the SEM model show that a significant degree of knowledge of marketing metrics is held by managers in Montenegro and that they consider it important when making strategic business decisions. The level of knowledge determines the degree of application, and this application also depends on the company size while the equity structure does not have a significant impact on their level of application.

The theoretical contributions of this study can be viewed from several perspectives, observing direct and indirect contributions to scholarly literature, as well as current and long-term scientific contributions. This paper presents a conceptual framework that provides a broader insight into the role and importance that marketing metrics have in the process of making strategic business decisions for managers in Montenegro – its primary theoretical contribution. Thus, this work expands the existing knowledge base regarding the

ways in which strategic business decisions are made in companies operating in transition economies, elucidating knowledge on the main indicators, which serve as inputs for managers to use in this process. This represents an indirect theoretical contribution of this research. Furthermore, this research offers a comprehensive analysis of how managers' knowledge of marketing metrics affects their application in the process of making strategic business decisions while assessing the extent to which these indicators are considered important by marketing managers when analyzing and monitoring the competitive position of companies in the market. Thus, this paper enhances scientific knowledge in the field of metrics and examines the reliability of the research methods, techniques and instruments applied in transition economies when making strategic business decisions. Through the analysis of the complexity of marketing metrics that managers know and use the most, this paper provides insights into the extent to which managers understand the meaning of these indicators and how capable they are of combining different marketing metrics when attempting to obtain more complex indicators applicable to the decision-making process. In this way, this paper also offers long-term theoretical contributions by indicating which marketing metrics, in accordance with the theoretical postulates, should be more represented in strategic business decision-making. This is important when it comes to strengthening knowledge management in companies operating in transition countries, helping them to improve their competitive stance and market position. The current scientific contribution of this paper is also reflected in the broader interconnections between the application of marketing metrics, business processes and overall business competitiveness of a company. Through discussion of the obtained results, this paper provides a comparison between the actual state of the application of metrics in the given transition economy and theoretical postulates that indicate the importance and role that marketing metrics should play when making strategic business decisions in companies operating in a modern business environment. Additionally, it reveals whether, in Montenegro, as a transition country, marketing metrics are perceived only as indicators of the performance of the marketing function or as indicators of the overall market position of the company as well. Finally, the theoretical contribution of this paper is also reflected in its provision of knowledge to the insufficiently detailed literature base of this field regarding transition economies, particularly in Montenegro. This is the first in-depth study on this topic conducted in the aforementioned country. Hence, this study serves as a basis for conducting further studies regarding this issue in Montenegro and in other transition economies as well.

The obtained results of this study also provide significant practical contribution. It gives insight into the extent to which Montenegrin managers are familiar with marketing metrics, which are covered by the research, thus revealing the direction in which managers need to spread their knowledge, as a basis for more accurate and precise business performance measurement. The results indicated that managers in Montenegro should place more effort in learning and implementation of marketing metrics, especially those whose application is more complex and requires a wider range of knowledge in field of finance and accounting, as well as larger databases of a company. Also, the appropriate application of such metrics implies that managers should do the continuous market research with the aim to track the changes of the market and of the position that their company has. Although managers in Montenegro are aware of the importance of consumers' metrics, these results indicate that they should place more emphasis on attracting new consumers, to overcome the foreign competitors and strengthen the market position. This conclusion stems from the fact that they mostly use consumers' metrics related to the existing customers of the company, but they do not use to a needed extent metrics related to the attracting new consumers, such as the consumers' structure or consumers' complaints. The implementation of these marketing metrics is of great importance for attracting new consumers, as a main prerequisite of overcoming the foreign competitors and strengthening the market position.

However, there are also several limitations that can provide motivation for further research in the field. The fact that the survey covers only companies from Montenegro is its key limitation. Besides of that, this study included companies from Montenegro regardless of the type of their economic activity, although the relative importance of marketing metrics significantly depends on it. With this in mind, future research should form a comparative analysis of companies in transition countries, more accurately identifying potential differences regarding the extent to which marketing managers are familiar with individual groups of metrics, as well as the extent to which they apply them and believe that they can provide the required information when designing an appropriate business strategy. Future studies should also include a wider range of marketing metrics such as product metrics, pricing, distribution and promotion, which are vital in helping companies to improve their marketing strategies. It would be intriguing to investigate whether or not the type of activity and the hierarchical levels of decision-making in the company affect the relevance and the application of certain marketing metrics. Given that this is not exclusively important when marketing metrics are being used, future research should incorporate the concept of time as an important factor in understanding the role that marketing metrics have for development of knowledge management in companies operating in transition markets.

References

- Ambler, T., Kokkinaki, F. and Puntoni, S. (2004), "Assessing marketing performance: reasons for metrics selection", *Journal of Marketing Management*, Vol. 20 Nos 3/4, pp. 475-498.
- Ambler, T., Kokkinaki, F., Puntoni, S. and Riley, D. (2001), "Assessing market performance: the current state of metrics", *Center for Marketing Working Paper*, (01-903).
- Ambler, T. and Roberts, J.H. (2008), "Assessing marketing performance: don't settle for a silver metric", *Journal of Marketing Management*, Vol. 24 Nos 7/8, pp. 733-750.
- Ambler, T. and Xiucun, W. (2003), "Measures of marketing success: a comparison between China and the United Kingdom", *Asia Pacific Journal of Management*, Vol. 20 No. 2, pp. 267-281.
- Barwise, P. and Farley, J.U. (2004), "Marketing metrics: status of six metrics in five countries", *European Management Journal*, Vol. 22 No. 3, pp. 257-262.
- Bendle, N., Farris, P., Pfeifer, P. and Reibstein, D. (2010), "Metrics that matter-to marketing managers", *Marketing Zfp*, Vol. 32, pp. 18-23.
- Bennett, R. (2007), "The use of marketing metrics by British fundraising charities: a survey of current practice", *Journal of Marketing Management*, Vol. 23 Nos 9/10, pp. 959-989.
- Brooks, N. and Simkin, L. (2011), "Measuring marketing effectiveness: an agenda for SMEs", *The Marketing Review*, Vol. 11 No. 1, pp. 3-24.
- Clark, B. (1999), "Marketing performance measures: history and interrelationships", *Journal of Marketing Management*, Vol. 15 No. 8, pp. 711-732.
- Clark, H.B., Abela, A.V. and Ambler, T. (2005), "Organizational motivation, opportunity and ability to measure marketing performance", *Journal of Strategic Marketing*, Vol. 13 No. 4, pp. 241-259.
- Cvitanovic, P.L. (2018), "Managing accounting and financial aspects of marketing", *Journal of Accounting and Management*, Vol. 8 No. 2, pp. 83-94.
- Davidson, H.J. (1999), "Transforming the value of company reports through marketing measurement", *Journal of Marketing Management*, Vol. 15 No. 8, pp. 757-777.
- De Ruyter, K. and Wetzels, M. (2000), "The marketing-finance interface: a relational exchange perspective", *Journal of Business Research*, Vol. 50 No. 2, pp. 209-215.
- Di Gregorio, A., Maggioni, I., Mauri, C. and Mazzucchelli, A. (2019), "Employability skills for future marketing professionals", *European Management Journal*, Vol. 37 No. 3, pp. 251-258.
- Edeling, A., Srinivasan, S. and Hanssens, D.M. (2020), "The marketing-finance interface: a new integrative review of metrics, methods, and findings and an agenda for future research", *International Journal of Research in Marketing*, doi: [10.1016/j.ijresmar.2020.09.005](https://doi.org/10.1016/j.ijresmar.2020.09.005).

- European Commission (2021), "What is an SME?", available at: https://ec.europa.eu/growth/smes/business-friendly-environment/sme-definition_en (accessed 10 August 2020).
- Eusebio, R., Andreu, J.L. and Belbeze, M.P.L. (2006), "Measures of marketing performance: a comparative study from Spain", *International Journal of Contemporary Hospitality Management*, Vol. 18 No. 2, pp. 145-155.
- Faridyahyaie, R., Faryabi, M. and Bodaghi Khajeh Noubar, H. (2012), "Identifying marketing effectiveness metrics (case study: East Azerbaijan industrial units)", *Business Excellence: A Scientific Journal for Promoting a Culture of Quality and Business Excellence*, Vol. 6 No. 2, pp. 47-57.
- Farley, J.U., Hoenig, S., Lehmann, D.R. and Nguyen, H.T. (2008), "Marketing metrics use in a transition economy: the case of Vietnam", *Journal of Global Marketing*, Vol. 21 No. 3, pp. 179-190.
- Farris, P.W., Bendle, N., Pfeifer, P. and Reibstein, D. (2014), *Marketing Metrics the Final Guide to Measuring Marketing Performance*, 2nd ed., Pearson, Upper Saddle River, NJ, pp. 13-20.
- Farris, P., Bendle, N., Pfeifer, P. and Reibstein, D. (2006), *Marketing Metrics: 50+ Metrics Every Executive Should Master*, Wharton School Publishing, Upper Saddle River, NJ.
- Frösén, J., Jaakkola, M., Vassinen, A., Parvinen, P. and Aspara, J. (2008), "Use and perceived importance of marketing metrics in different business settings", available at: <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.604.6487&rep=rep1&type=pdf> (accessed 25 August 2020).
- Gao, Y. (2010), "Measuring marketing performance: a review and a framework", *The Marketing Review*, Vol. 10 No. 1, pp. 25-40.
- Gaskill, A. and Winzar, H. (2013), "Marketing metrics that contribute to marketing accountability in the technology sector", *SAGE Open*, Vol. 3 No. 3, p. 2158244013501332.
- Goldoni, V. and Oliveira, M. (2010), "Knowledge management metrics in software development companies in Brazil", *Journal of Knowledge Management*, Vol. 14 No. 2, pp. 301-313, doi: [10.1108/13673271011032427](https://doi.org/10.1108/13673271011032427).
- Grbac, B. and Meler, M. (2010), *Marketing Metrics*, Faculty of Economics, University of Rijeka, Rijeka.
- Griffith, D.A., Kiessling, T. and Dabic, M. (2012), "Aligning strategic orientation with local market conditions: implications for subsidiary knowledge management", *International Marketing Review*, Vol. 29 No. 4, pp. 379-402, doi: [10.1108/02651331211242629](https://doi.org/10.1108/02651331211242629).
- Grimalda, G., Barlow, D. and Meschi, E. (2010), "Varieties of capitalisms and varieties of performances: accounting for inequality in post-Soviet Union transition economies", *International Review of Applied Economics*, Vol. 24 No. 3, pp. 379-403.
- Gupta, S. and Zeithaml, V. (2006), "Customer metrics and their impact on financial performance", *Marketing Science*, Vol. 25 No. 6, pp. 718-739.
- Hacioglu, G. and Gök, O. (2013), "Marketing performance measurement: marketing metrics in Turkish firms", *Journal of Business Economics and Management*, Vol. 14 No. Supplement_1, pp. S413-S432.
- Herremans, I.M. and Ryans, J.K. Jr (1995), "The case for better measurement and reporting of marketing performance", *Business Horizons*, Vol. 38 No. 5, pp. 51-61.
- Izakova, N.B., Kapustina, L.M. and Sysoyeva, T.L. (2017), "How to measure relationship marketing efficiency in industrial market", *Prakticheskiy Marketing*, Vol. 8, pp. 28-33.
- Järvinen, J. and Karjaluoto, H. (2015), "The use of web analytics for digital marketing performance measurement", *Industrial Marketing Management*, Vol. 50, pp. 117-127.
- Kipasha, E.F. (2013), "Performance of microfinance institutions in Tanzania: integrating financial and non-financial metrics", *European Journal of Business and Management*, Vol. 5 No. 4, pp. 94-105.
- Kosan, L. (2014), "Accounting for marketing: marketing performance through financial results", *International Review of Management and Marketing*, Vol. 4 No. 4, pp. 276-289.
- Kotler, P. and Keller, K.L. (2007), *Marketing Management*, 12th ed., Prentice-Hall, Hoboken, NJ.
- Kovacic, W.E. (1997), "Getting started: creating new competition policy institutions in transition economies", *Brooklyn Journal of International Law*, Vol. 23 No. 2, pp. 403-453.
- Kurtović, E., Brkić, N. and Nefić, A. (2010), "Research on the application of marketing metrics at the leading producers of fast moving consumer goods (FMCG) in the region: Bosnia And Herzegovina, Croatia and Serbia", *Collection of Works*, No. 30.

- Lengyel, I. and Rechnitzer, J. (2013), "The competitiveness of regions in the Central European transition countries", *The Macro theme Review*, Vol. 2 No. 4, pp. 106-121.
- Ling-Yee, L. (2011), "Marketing metrics' usage: its predictors and implications for customer relationship management", *Industrial Marketing Management*, Vol. 40 No. 1, pp. 139-148.
- Melovic, B. Vukcevic, M. and Cirovic, D. (2020), "Marketing metrics: knowledge and implementation by managers in Montenegro", *Economic and Business Trends Shaping the Future*, Skopje, Republic of North Macedonia, available at: <http://doi.org/10.47063/EBTSF.2020.0039>
- Milichovský, F. (2015), "Measuring indicators for marketing effectiveness in Czech companies// indicadores Para medir la eficacia del marketing en las empresas checas", *Revista de Metodos Cuantitativos Para la Economia y la Empresa*, Vol. 20, pp. 3-24.
- Milichovsky, F. and Simberova, I. (2015), "Marketing effectiveness: metrics for effective strategic marketing", *Engineering Economics*, Vol. 26 No. 2, pp. 211-219.
- Mintz, O. and Currim, I.S. (2015), "When does metric use matter less?", *European Journal of Marketing*, Vol. 49 Nos 11/12, pp. 1809-1856.
- Mintz, O. and Currim, I.S. (2013), "What drives managerial use of marketing and financial metrics and does metric use affect performance of marketing-mix activities?", *Journal of Marketing*, Vol. 77 No. 2, pp. 17-40.
- Mintz, O., Gilbride, T.J., Lenk, P. and Currim, I.S. (2020), "The right metrics for marketing-mix decisions", *International Journal of Research in Marketing*, Vol. 38 No. 1, doi: [10.1016/j.ijresmar.2020.08.003](https://doi.org/10.1016/j.ijresmar.2020.08.003).
- Moorman, C. and Day, G.S. (2016), "Organizing for marketing excellence", *Journal of Marketing*, Vol. 80 No. 6, pp. 6-35.
- Morgan, N.A. and Rego, L.L. (2006), "The value of different customer satisfaction and loyalty metrics in predicting business performance", *Marketing Science*, Vol. 25 No. 5, pp. 426-439.
- Nexhipi, O. (2014), "Marketing metrics and its usage: a case of restaurant industry", *International Journal of Economics, Commerce and Management*, Vol. 2 No. 9, pp. 1-17.
- Nwokah, N.G. (2009), "Customer – focus, competitor – focus and marketing performance", *Measuring Business Excellence*, Vol. 13 No. 3, pp. 20-28.
- O'Sullivan, D. and Abela, A.V. (2007), "Marketing performance measurement ability and firm performance", *Journal of Marketing*, Vol. 71 No. 2, pp. 79-93.
- O'Sullivan, D. (2007), "The measurement of marketing performance in Irish firms", *Irish Marketing Review*, Vol. 19 Nos 1/2, p. 26.
- Parcheta, D. (2016), "Application of customer lifetime value (CLV) to fast moving consumer goods", available at: http://blue-marble.com/assets/clv_ce_pilotest_2013_wcover.pdf (accessed 25 August 2020).
- Pauwels, K. (2015), "Truly accountable marketing: the right metrics for the right results", *GfK Marketing Intelligence Review*, Vol. 7 No. 1, pp. 8-15.
- Petersen, J.A., McAlister, L., Reibstein, D.J., Winer, R.S., Kumar, V. and Atkinson, G. (2009), "Choosing the right metrics to maximize profitability and shareholder value", *Journal of Retailing*, Vol. 85 No. 1, pp. 95-111.
- Petrillo, A., De Felice, F. and Zomparelli, F. (2019), "Performance measurement for world-class manufacturing: a model for the Italian automotive industry", *Total Quality Management & Business Excellence*, Vol. 30 Nos 7/8, pp. 908-935.
- Raghubir, P., Roberts, J., Lemon, K.N. and Winer, R.S. (2010), "Why, when, and how should the effect of marketing be measured? A stakeholder perspective for corporate social responsibility metrics", *Journal of Public Policy & Marketing*, Vol. 29 No. 1, pp. 66-77.
- Roth, K. and Kostova, T. (2003), "Organizational coping with institutional upheaval in transition economies", *Journal of World Business*, Vol. 38 No. 4, pp. 314-330.
- Šalkovska, J. and Ogsta, E. (2014), "Quantitative and qualitative measurement methods of companies' marketing efficiency", *Management of Organizations: Systematic Research*, Vol. 70, pp. 91-105.
- Sampaio, C.H., Simões, C., Perin, M.G. and Almeida, A. (2011), "Marketing metrics: insights from Brazilian managers", *Industrial Marketing Management*, Vol. 40 No. 1, pp. 8-16.

Schulze, C., Skiera, B. and Wiesel, T. (2012), "Linking customer and financial metrics to shareholder value: the leverage effect in customer-based valuation", *Journal of Marketing*, Vol. 76 No. 2, pp. 17-32.

Seggie, S.H., Cavusgil, E. and Phelan, S.E. (2006), "Measurement of return on marketing investment: a conceptual framework and the future of marketing metrics", *Industrial Marketing Management*, Vol. 36 No. 6, pp. 834-841.

Solcansky, M., Sychrova, L. and Milichovsky, F. (2011), "Marketing effectiveness by way of metrics", *Economics and Management*, Vol. 16, pp. 1323-1328.

Svetličič, M. and Kunčič, A. (2013), "FDI, the crisis and competitiveness of transition economies", *Journal of Balkan and Near Eastern Studies*, Vol. 15 No. 3, pp. 260-279.

Zack, M., McKeen, J. and Singh, S. (2009), "Knowledge management and organizational performance: an exploratory analysis", *Journal of Knowledge Management*, Vol. 13 No. 6, pp. 392-409, doi: [10.1108/13673270910997088](https://doi.org/10.1108/13673270910997088).

Zahay, D. and Griffin, A. (2010), "Marketing strategy selection, marketing metrics, and firm performance", *Journal of Business & Industrial Marketing*, Vol. 25 No. 2, pp. 84-93.

Zinkhan, G.M. and Verbrugge, J.A. (2000), "The marketing/finance interface: two divergent and complementary views of the firm", *Journal of Business Research*, Vol. 50 No. 2, pp. 143-148.

Zinnes, C., Eilat, Y. and Sachs, J. (2001), "Benchmarking competitiveness in transition economies", *The Economics of Transition*, Vol. 9 No. 2, pp. 315-353.

Further reading

Изакова, НБ., Капустина, ЛМ. and Сысоева, ТЛ. (2017), "Как измерить эффективность маркетинга взаимоотношений на промышленном рынке", *Практический маркетинг*, Vol. 5, p. 243.

Appendix 1

Table A1 ANOVA test examining differences in the expected values of marketing metrics for four categories of company size

		<i>Sum of squares</i>	<i>Df.</i>	<i>Mean square</i>	<i>F.</i>	<i>Sig.</i>
Number of consumers/clients (NF1)	Between groups	16.463	3	5.488	3.117	0.028
	Within groups	290.484	165	1.761	–	–
	Total	306.947	168	–	–	–
Consumer/client structure (NF2)	Between groups	19.277	3	6.426	4.370	0.005
	Within groups	239.669	163	1.470	–	–
	Total	258.946	166	–	–	–
Consumer/customer satisfaction (F3)	Between groups	21.147	3	7.049	5.491	0.001
	Within groups	211.800	165	1.284	–	–
	Total	232.947	168	–	–	–
Consumer/customer complaints (NF4)	Between groups	40.319	3	13.440	9.777	0.000
	Within groups	226.817	165	1.375	–	–
	Total	267.136	168	–	–	–
Consumer/customer loyalty (NF5)	Between groups	16.866	3	5.622	4.829	0.003
	Within groups	192.081	165	1.164	–	–
	Total	208.947	168	–	–	–
Consumer/customer expectations (NF6)	Between groups	19.895	3	6.632	4.713	0.003
	Within groups	232.164	165	1.407	–	–
	Total	252.059	168	–	–	–
Consumer/client recommendations (NF7)	Between groups	14.498	3	4.833	3.653	0.014
	Within groups	218.295	165	1.323	–	–
	Total	232.793	168	–	–	–
Customer retention rate (NF8)	Between groups	12.765	3	4.255	2.541	0.058
	Within groups	276.336	165	1.675	–	–
	Total	289.101	168	–	–	–
Churn rate (NF9)	Between groups	9.732	3	3.244	1.579	0.196
	Within groups	338.942	165	2.054	–	–
	Total	348.675	168	–	–	–
Expected consumer lifetime value (NF10)	Between groups	12.884	3	4.295	2.134	0.098
	Within groups	332.063	165	2.013	–	–
	Total	344.947	168	–	–	–
The expected time value of the potential consumer (NF11)	Between groups	6.947	3	2.316	1.198	0.312
	Within groups	318.958	165	1.933	–	–
	Total	325.905	168	–	–	–
Consumer return (NF12)	Between groups	13.246	3	4.415	2.144	0.097
	Within groups	339.855	165	2.060	–	–
	Total	353.101	168	–	–	–
Sales volume (F1)	Between groups	13.328	3	4.443	2.973	0.033
	Within groups	246.541	165	1.494	–	–
	Total	259.870	168	–	–	–
Profitability (F2)	Between groups	23.959	3	7.986	5.630	0.001
	Within groups	234.041	165	1.418	–	–
	Total	258.000	168	–	–	–
ROI (F3)	Between groups	17.006	3	5.669	2.806	0.041
	Within groups	333.396	165	2.021	–	–
	Total	350.402	168	–	–	–
ROMI (F4)	Between groups	18.573	3	6.191	3.101	0.028
	Within groups	327.421	164	1.996	–	–
	Total	345.994	167	–	–	–
ROS (F5)	Between groups	17.959	3	5.986	3.104	0.028
	Within groups	318.172	165	1.928	–	–
	Total	336.130	168	–	–	–

(continued)

Table A1

		<i>Sum of squares</i>	<i>Df.</i>	<i>Mean square</i>	<i>F.</i>	<i>Sig.</i>
Marketing cost (F6)	Between groups	20.693	3	6.898	3.504	0.017
	Within groups	324.787	165	1.968	–	–
	Total	345.479	168	–	–	–
Unit marketing costs (F7)	Between groups	17.166	3	5.722	2.282	0.081
	Within groups	413.663	165	2.507	–	–
	Total	430.828	168	–	–	–
Long-term investment effects (F8)	Between groups	22.293	3	7.431	3.649	0.014
	Within groups	327.889	161	2.037	–	–
	Total	350.182	164	–	–	–
Market share (F9)	Between groups	23.026	3	7.675	4.283	0.006
	Within groups	295.661	165	1.792	–	–
	Total	318.686	168	–	–	–
Market growth (F10)	Between groups	20.595	3	6.865	3.614	0.015
	Within groups	313.405	165	1.899	–	–
	Total	334.000	168	–	–	–
Availability of services (F11)	Between groups	16.431	3	5.477	3.667	0.014
	Within groups	246.421	165	1.493	–	–
	Total	262.852	168	–	–	–
Contribution margin (F12)	Between groups	17.584	3	5.861	3.044	0.031
	Within groups	310.028	161	1.926	–	–
	Total	327.612	164	–	–	–

Appendix 2

Table A2 ANOVA test examining the differences in the expected values of marketing metrics for domestic and foreign companies

		<i>Sum of squares</i>	<i>Df.</i>	<i>Mean square</i>	<i>F.</i>	<i>Sig.</i>
Number of consumers/clients (NF1)	Between groups	0.081	1	0.081	0.044	0.834
	Within groups	306.866	167	1.838	–	–
	Total	306.947	168	–	–	–
Consumer/client structure (NF2)	Between groups	1.151	1	1.151	0.737	0.392
	Within groups	257.795	165	1.562	–	–
	Total	258.946	166	–	–	–
Consumer/customer satisfaction (F3)	Between groups	10.080	1	10.080	7.553	0.007
	Within groups	222.867	167	1.335	–	–
	Total	232.947	168	–	–	–
Consumer/customer complaints (NF4)	Between groups	11.196	1	11.196	7.306	0.008
	Within groups	255.940	167	1.533	–	–
	Total	267.136	168	–	–	–
Consumer/customer loyalty (NF5)	Between groups	0.119	1	0.119	0.095	0.759
	Within groups	208.828	167	1.250	–	–
	Total	208.947	168	–	–	–
Consumer/customer expectations (NF6)	Between groups	3.533	1	3.533	2.374	0.125
	Within groups	248.526	167	1.488	–	–
	Total	252.059	168	–	–	–
Consumer/client recommendations (NF7)	Between groups	768	1	768	0.553	0.458
	Within groups	232.025	167	1.389	–	–
	Total	232.793	168	–	–	–
Customer retention rate (NF8)	Between groups	0.195	1	0.195	0.112	0.738
	Within groups	288.906	167	1.730	–	–
	Total	289.101	168	–	–	–
Churn rate (NF9)	Between groups	8.107	1	8.107	3.976	0.048
	Within groups	340.567	167	2.039	–	–
	Total	348.675	168	–	–	–
Expected consumer lifetime value (NF10)	Between groups	0.835	1	0.835	0.405	0.525
	Within groups	344.112	167	2.061	–	–
	Total	344.947	168	–	–	–
The expected time value of the potential consumer (NF11)	Between groups	0.165	1	0.165	0.085	0.771
	Within groups	325.740	167	1.951	–	–
	Total	325.905	168	–	–	–
Consumer return (NF12)	Between groups	0.081	1	0.081	0.038	0.845
	Within groups	353.020	167	2.114	–	–
	Total	353.101	168	–	–	–
Sales volume (F1)	Between groups	0.205	1	0.205	0.132	0.717
	Within groups	259.664	167	1.555	–	–
	Total	259.870	168	–	–	–
Profitability (F2)	Between groups	0.544	1	0.544	0.353	0.553
	Within groups	257.456	167	1.542	–	–
	Total	258.000	168	–	–	–
ROI (F3)	Between groups	2.284	1	2.284	1.095	0.297
	Within groups	348.119	167	2.085	–	–
	Total	350.402	168	–	–	–
ROMI (F4)	Between groups	0.377	1	0.377	0.181	0.671
	Within groups	345.617	166	2.082	–	–
	Total	345.994	167	–	–	–
ROS (F5)	Between groups	1.472	1	1.472	0.735	0.393
	Within groups	334.658	167	2.004	–	–

(continued)

Table A2

		Sum of squares	Df.	Mean square	F.	Sig.
Marketing cost (F6)	Total	336.130	168	–	–	–
	Between groups	2.110	1	2.110	1.026	0.313
	Within groups	343.369	167	2.056	–	–
Unit marketing costs (F7)	Total	345.479	168	–	–	–
	Between groups	20.291	1	20.291	8.254	0.005
	Within groups	410.537	167	2.458	–	–
Long-term investment effects (F8)	Total	430.828	168	–	–	–
	Between groups	3.245	1	3.245	1.525	0.219
	Within groups	346.937	163	2.128	–	–
Market share (F9)	Total	350.182	164	–	–	–
	Between groups	8.651	1	8.651	4.660	0.032
	Within groups	310.035	167	1.856	–	–
Market growth (F10)	Total	318.686	168	–	–	–
	Between groups	12.306	1	12.306	6.388	0.012
	Within groups	321.694	167	1.926	–	–
Availability of services (F11)	Total	334.000	168	–	–	–
	Between groups	1.206	1	1.206	0.769	0.382
	Within groups	261.646	167	1.567	–	–
Contribution margin (F12)	Total	262.852	168	–	–	–
	Between groups	2.293	1	2.293	1.149	0.285
	Within groups	325.320	163	1.996	–	–
	Total	327.612	164	–	–	–

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