TALLINN UNIVERSITY OF TECHNOLOGY

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DETERMINANTS OF FINANCIAL SUCCESS IN HOTEL BUSINESS BY THE EXAMPLE OF A SMALL HOTEL IN RUSSIA

Bachelor's thesis

Programme International Business Administration, specialization Finance and Accounting

Supervisor: Artjom Saia, PhD

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I hereby declare that I have compiled the thesis independently

and all works, important standpoints and data by other authors

have been properly referenced and the same paper

has not been previously presented for grading.

The document length is 8295 words from the introduction to the end of conclusion.

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ABSTRACT

In the beginning of the third millennium tourism has turned into a powerful socio-economic phenomena that considerably influence the economy. It has become one of the most profitable business in the world that can be equaled to oil and gas extraction industry and automotive industry. Nevertheless, there are small hotels existing that can have more weaknesses and difficulties than huge hotels and chains. This thesis investigates the determinants of financial success of a small hotel. Using the data from accounting and financial annual reports of one hotel in Russia and previously done researches to create a regression model and analyze the results. The study reports that both hypotheses are right: digital marketing strategies are positively associated with the room occupancy and anti-crisis management decisions are positively associated with the hotel profitability.

Keywords: hospitality, hotel industry, determinants of financial success (DFS), digitalization, anti-crisis management.

INTRODUCTION

Nowadays hotel industry has entered a fast track of development. Hotels have become a strong socio-economic and political phenomenon being one of the most profitable types of business in the world. Tourism system causes to interlace such definitions as economic and cultural interests, safety, international relations, ecology and employment, playing a great role for the government and for an individual person itself. Tourism industry is a combination of enterprises, institutions and organizations that provide production, distribution, exchange and consumption of a tourist product, development and usage of touristic resources and creation of procurement tourism base. Thus, hotels are defined to be a key factor in tourist product formation. Nevertheless, a problem of a small-scale business exists that makes hotels and other enterprises face various problems, even though such business helps market economy to function and develop.

There is a great quantity of hotels in every city of every country in the world now creating a high competition among the field. Accordingly, the higher hotel service quality is the higher level of competitiveness the business has. This is necessary to define the key factors of hotel success and overall profitability that have been evolving along with the industry itself, globalization and technology development. However, not all the hotels are located in the favourable areas, especially speaking about small towns, making it difficult for enterprises to create high levels of profits. This thesis focuses on small hotels which face various problems of small-scale business in tourism industry. The research problem of this thesis is difficulty of defining right factors that influence profitability of a small hotel.

The aim of this thesis is to define modern success factors that positively influence small hotel's profitability and analyze them via statistical regression. Object of the research is a small hotel in Russia. Subject of the research is determinants of financial success in hotel business.

To achieve the goal of the research, following tasks have to be performed:
- Analyzing hotel service industry and define modern determinants of hotel financial success;
- Analyzing determinants' level of impact via using statistical regression models;
- Discussing the results about proposed hypotheses.

There hypotheses are indicated by as follows:

H1: Digital marketing strategies are positively associated with the room occupancy.

H2: Anti-crisis management decisions are positively associated with the hotel profitability.

The data for the research has been gathered from accounting and financial statements for 20 years of one small hotel in Russia. The methods that are used for the analysis in the research are theoretical and empirical: analysis of hotel service market, statistical regression and its analysis. The methodology is based on such independent variables as digital marketing strategies (digitalization) and anti-crisis decisions (management). The dependent variables are connected to the financial success of the hotel represented by the room occupancy and profitability.

The graduation thesis is divided mainly on 3 chapters. Chapter 1 gives an overview on the hotel industry and its role in microeconomics. Moreover, it consists of the information from previous researches about the topic and explains the definitions of the keywords. Chapter 2 describes the methodology and data, descriptive statistics and regression analysis. Chapter 3 focuses on the results. Finally, there is a conclusion of the thesis.

1. THEORETICAL FRAMEWORK

This section deals with theoretical background of the thesis. First subchapter deals with hotel industry and microeconomic theory, explaining the definition of the keywords. The second subchapter proceeds with information about previous researches about the topic. And finally, the third abstract focuses on the research problem and the hypotheses suggested in the thesis.

1.1. Hotel industry and its role in microeconomics

As the time goes by the quantity of hotels is rapidly growing in the world, and in Russia respectively. Economic opportunities of hospitality industry development have created favourable conditions for organizational-economic processes in the world. Hospitality is one of the fundamental definitions of human civilization. Nevertheless, high competition level on hotel service field forces managers to come up with different campaigns and extraordinary marketing strategies. Against the background of rising tourism flow number, hotel business has turned out to be a high-income industry creating a variety of organizational hotel forms. Hotels are a component of hospitality industry along with such terms as guest houses, motels, hostels, dormitories, apartments, etc. John Sharpe, former president and CEO of the Four Seasons Hotels and Resorts states that "hospitality is welcoming a person into your environment, such as your hotel or restaurant, your home, or even your office, and making them feel warm and secure and that they will be cared for." (Sturman et al. 2011). Hospitality industry can be defined as an area

of entrepreneurship based on hospitality principles, where generosity and friendly attitude towards guests are emphasized.

This is important to understand functions of a modern hotel to assess the value of this business for the society and microeconomics itself. The main function, for sure, is providing accommodation, food and other additional services for tourists and other temporary residents in return for remuneration. In majority of countries hotels play an important role allowing to conduct business meetings, conferences as well as leisure and entertainment activities. In addition, hotels provide thousands of working places for a variety of professions and specializations and thereby attract working force. Moreover, there are people busy in the field that have their own business - the owners of small hotels. In addition, these enterprises can play a role of retail establishments for selling production of other fields. These products can include food that is offered in hotel' cafe, souvenirs and other goods, beverages and even water, gas and energy. Apart from the fact that hotels create immediate employment for their workers, they also create significant indirect employment for those who work in supplying industries. The last but not least, hotels are an important source of social and living maintenance for local population. Their additional services as cafes, bars, etc., attract a great number of indigenous consumers and this fact results in creation of new social centres in localities. Summing up everything mentioned above, it is clear that hotels are necessary units contributing to the social life of the city and microeconomics itself (Zaberzhinsky, 2016).

As it is been already said, it is needed to identify factors that influence success in hotel activity. This thesis is focused on the determinants of financial success (DFS) of the hotel. To understand the main indicators management of the hotel has to thoroughly analyze market, understand the field where the business functions, study the target group of clients and assess the level of competition. Received data will let the management of the hotel create an overview on the factors that can critically influence the success and profitability of the firm. The quantity of this determinants can be different but the priority should be given to the factors that have higher quantitative figure. There are potential success factors that are standardized in the form of following range (Gaidenko 2008):

1) Technology dependent factor - the availability of innovations, possibility of creating a new hotel service, the level of acquisition of existing technologies;

2) Production-based dependent factor - low first costs of offered services (transfer, ironing, laundry, room service, so on), the quality of the service, favourable location of the hotel, the availability of qualified staff, a high level of labour productivity, etc.;

3) Marketing-based factor - high qualification of the workers in marketing department, the variety of the provided service, consideration of the clients' feedbacks, accessible information system for the guests;

4) Professional skills based factor - level of the professional excellence, level of the service quality, the ability to quickly react on the changing situation on the market (especially important for small hotels in terms of anti-crisis management).

Technology is one of the main components of success in almost every business nowadays. The Internet is a communicative field for exchanging information including the abilities of print media, radio, television and computer technologies. The global net provides humanity with broad variety of opportunities for doing and maintaining business. It is used in both traditional fields of business (manufacturing, trading, service sectors, and so on) and innovative directions of business. Technological progress and innovations are one of the factors that greatly influence the transformation and organization of hotel industry (Malakhova, Ushakov, 2010). Virtual space in touristic corporations is formed and utilized via technologies as well. The main factor that forms virtual space is an individual with the set of skills, knowledge and experience. The great role in a virtual touristic activity belongs to communication technologies which form the basement for online work of the company. Communication technologies in touristic firms are especially important for circulation and dissemination of the knowledge, which in return is the source of competitiveness of a firm. Hotel industry is business that nowadays can not function without the Internet and its services. The main function of the Internet for hospitality industry is promotion of the business objects like hotels, motels, and so on. There are a huge variety of web-sites and services that help hotels and other hospitality industry businesses to promote the services and spread the information for their potential clients. Online systems of booking the hotels (Booking, AirBnB, Ostrovok, 101 Otel', and so on) significantly simplify the process of booking the room or both clients and administrators of the hotel. Such "booking agents" have such advantages as

permanent availability, instantaneous booking, managing orders and surely the economy of time for all parties (Tsybyshev, 2017). "Booking agents" help hotels and especially their management to save time by the help of their services bringing more clients to the hotel with less effort. The usage of such online booking services is included in the term of digitalization and therefore can be defined as a determinant of financial success of the hotel.

Professional skills play a great role in hotel management and can positively influence hotel profitability. Anti-crisis management is especially important compound in administering a firm (Ivanov, Volov, 2010). The likelihood of periodic crisis phenomena occurrence (insolvency, decreasing of hotel financial stability, disruption of operational activity, and so on) exists in circumstances of constantly changing external and internal factors of the business environment. Ivanov and Volov (2010) define crisis as an objective economic process which represents one of the most serious forms of financial balance violation for a hotel or a company as a whole. Every type of crisis can lead to sufficient shock for a company and overall activity of the business and, moreover, threatens its economic safety. However, if the effective resolution is implied, crisis can have a positive character in terms of improving business-processes and quality of services, and strengthening firm's position on the market. Economic reform places an individual on the first place among other factors and types of resources, thus personal management becomes of a great significance in anti-crisis management. In terms of a small-scale business anti-crisis management and its decisions play a crucial role for a small hotel.
conclusion

Digital marketing decisions and anti-crisis management decisions can be defined as determinants of financial success of a small hotel, according to the information mentioned above. Digital marketing strategies and digitalization of the business as a whole help a hotel to attract more clients (and, thereby, can affect profitability of the hotel) with less effort of the management and administrators. Right anti-crisis management decisions have a direct impact on the profitability and success of overall hotel operations, helping a firm to prevent internal crisis occurrence or to leave the crisis conditions more smoothly. Digital marketing decisions and anti-crisis management decisions are defined as independent variables in this thesis which might have effect on the occupancy and hotel profitability respectively.

1.2. Previous researches

The research in "Identification of the key factors for success in the hotel sector" was carried out in 2018. Alvarez-Ferrer, Campa-Planas, Gonzales-Bustos (2018) concluded that there are three main groups of key factors that can affect profitability: financial (indebtedness, size, margin and asset turnover, operating leverage), management (management system, quality management system, environmental management system, corporate social responsibility, yield management) and generic (longevity, location and position).

Speaking about management, now it is important to take into consideration anti-crisis management while speaking about hotel success. Anti-crisis management is complex, systematic management where the main goals are "crisis prevention, development of measures for minimizing its negative consequences in favour of further development of organization and national economy as a whole." (Belyaev 2011). Small-scale hotels have to understand the importance of anti-crisis management decisions in their activity because they are very dependable on any changes in the market. Shepelenko (2015) believes that anti-crisis management is managing in the context of insolvency which strives to quit such negative condition. Insolvency prevention can be defined as implementation of preventive events in the hotel under a stable deterioration tendency of the enterprise (Shepelenko, 2015). Anti-crisis management has to provide a firm with a competitive advantage on the market and sufficient amount of working capital for a company to pay back to creditors successfully. The efficiency of anti-crisis management can be characterized by an ability of the firm to adequately behave along with possible differences on the market that threaten company's functioning and profitability. Right anti-crisis management decisions have a great effect on the operational side of the hotel and, moreover, can decrease costs caused by probable crisis and increase revenues of a firm due to proper administering of a hotel. Thus, anti-crisis management decisions can be a determinant of financial success for a small hotel.

Anti-crisis management, as it has been said above, is closely related to the classification of the management personnel. On time reclassification of the managers can positively influence overall company's activity and profitability (Mikhailova, 2010). Professionalism of the staff can influence qualitative and quantitative labour results in terms of decreased costs and physical and mental efforts. Obtaining the professional knowledge for personnel is vital for a company that attempts to prosper on the market. The more qualified personnel a business has, the more competitive it is on the industry market. Improving professional skills of staff includes various forms of specified education, the growth of the qualification level and specialization. Moreover, important traits of personality also play a great role for development of professional skills. It can be defined that anti-crisis management decisions are strongly connected with anti-crisis management.

As it has been said above in previous chapter technology plays a great role in hotel profitability. Hotel industry is one of the business fields where one of the highest level of competition to attract more clients is. Especially, speaking about attracting more guests via Internet. Thus, the role of the digital marketing in hotel processes is very important. High quality advertisements in Internet and right digital marketing strategies can positively influence hotel profits and minimize other costs as well. There can be a lot of ways how to advertise the hotel via the global net: creating hotel's own website with unique and easy interface, contracts with online booking services such as Booking.com, Airbnb, and so on. De Pelsmacker, van Tilburg, Holthof (2018) state that the room occupancy of the hotel (and profitability of the hotel, indirectly) can be influenced by the usage of digital marketing strategies.

1.3. The development of the research question and hypotheses

According to the previous sub-chapters, it is clear that the main fields researched in this thesis are digitalization and anti-crisis management. Digitalization of the business, and of the hotel industry especially, is a necessary component of success. Right digital strategy and marketing decisions can greatly influence the profitability of a firm, attracting more potential clients with

less time and effort. Anti-crisis management decisions (along with qualified personnel) can affect hotel profitability and the success of operational and financial activity of a firm. Thus, these terms are suggested to be independent variables for proposed hypotheses.

Occupancy of a hotel directly influence the financial profitability of a firm - the more people use the service of a hotel and stay there, the more profit a hotel gets. Occupancy is one of two dependent variables in proposed hypotheses due to a strong connection to a financial success of a small hotel. Profitability of a hotel is hotel revenue, indeed. Thus profitability (revenue) of a hotel is a second dependent variable in proposed hypotheses.

The hypotheses that have been proposed in the thesis are based on the theoretical part and previous researches mentioned above. The hypotheses are:

H1: Digital marketing strategies are positively associated with the room occupancy.

As it has been already mentioned, digitalization of the business is definitely important compound of financial success in hotel industry. Room occupancy is closely related to the definition of financial profitability of a firm. Thus, it is assumed that digital marketing strategies can be positively associated with room occupancy.

H2: Anti-crisis management decisions are positively associated with the hotel profitability.

Anti-crisis management decisions that help a small-scale business (a small hotel here) to prevent crisis inside the firm (insolvency) and to successfully leave the state of crisis. Right management solutions of crisis related problems can have an effect on the financial operations and overall success of a hotel. Thus, it is assumed that anti-crisis management decisions can be positively associated with the hotel profitability.

2. METHODOLOGY AND EMPIRICAL RESEARCH

2.1 Data and variables

The data for the research is gathered from accounting and financial statements of one small hotel in Russia. It is a time series study on one exact hotel. For this study quarterly data was collected for the period from 2000 to 2020 - the time of the hotel existence. Time series data presents information about one individual (in our case one hotel) collected over the period of time. Here it is 20 years. The data includes various financial, managerial and other variables presenting hotel's performance or information that helps to evaluate it. So, this study is focused on the features that can directly influence the success of the particular hotel.

The data consists of 81 observations that relate to different aspects of hotel. There are variables reflecting financial side of the hotel and showing its earnings and costs. So, there is information on the most relevant expenses for the taken research, such as digital marketing costs, renovation expenses and costs on the requalification of staff members (increasing of their skills' level). Also, data takes into account the availability of various services (both internal and external) that can be significant for hotel's success. There is a sauna appeared in 2010 as an internal factor, and also air and bus connection in the city that was available in different time periods. Another point that is reflected in data is occupancy (number of people visited the hotel during the period) that seems to be one of the key information to investigate and assess hotel's performance and success factors, and another variable connected with occupancy that is cost of stay for 1 person per night. Besides, the data presents variables connected with managerial decisions (to be more precise, anti-crisis decisions) and shows the share of them of the total. Then, the data includes the

information about the number of holidays during the quarter (considering both national and international holidays and weekends) as potential days for travelling. Another aspect is the city's characteristics which is population of the city and number of all the hotels located in the city and its suburbs. First point is taken due to growth of the city, leading to improving some of the industries, and, as a result, attracting more visitors there. The number of hotels is in fact the number of competitors on the market which can also create difficulties, especially for the small hotel observing in this research.

In this study, the main idea is to concentrate on the data connected with profitability and attendance, and key factors to success in these two parameters that are related to digitalization and management. As the hotel is not quite big, there are some features influencing success and failure which may differ from those that apply to large hotels.

Two regression models with two different dependent and independent variables were applied to find out which factors affect two key issues for any hotel (occupancy and profit), and analyze the financing, managerial and strategic decisions of the hotel in order to understand the effect.

Although time series are widely used for research and econometric models, there are some special problems researchers may face. Most of empirical works based on time series data usually assume that the underlying time series is stationary. Loosely speaking, a time series is stationary if its mean and variance do not vary systematically over time (Gujarati, 2004). If a time series is not stationary in the sense just defined, it is called a nonstationary time series. Stationary time series are important because if the time series is nonstationary, it can be studied only for particular periods of time and makes a researcher unable to forecast for further periods.

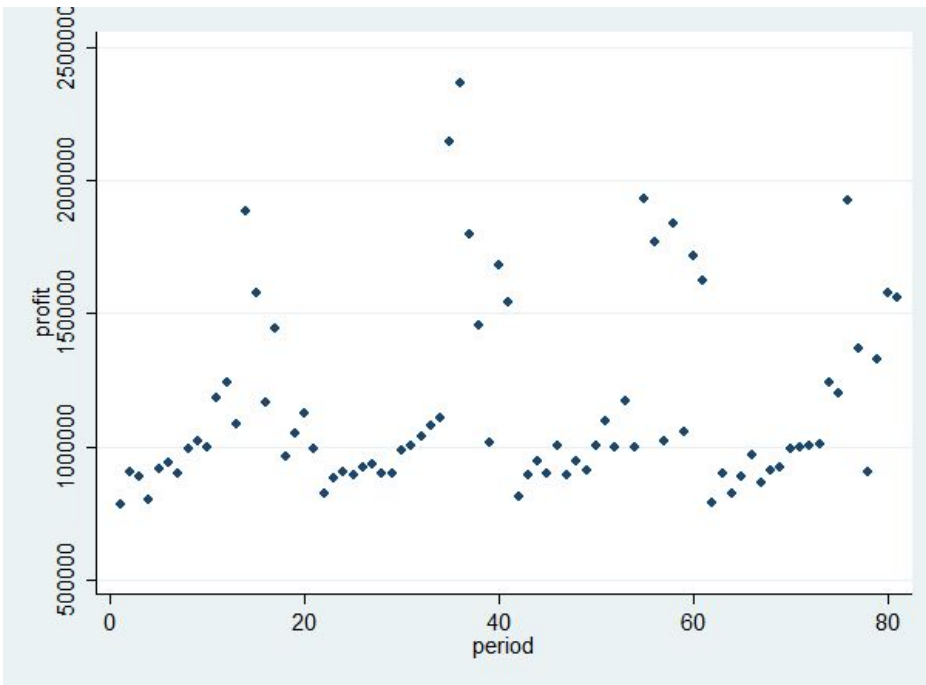Here are plots presenting the time series of the research data - Figure 1. and Figure 2.:

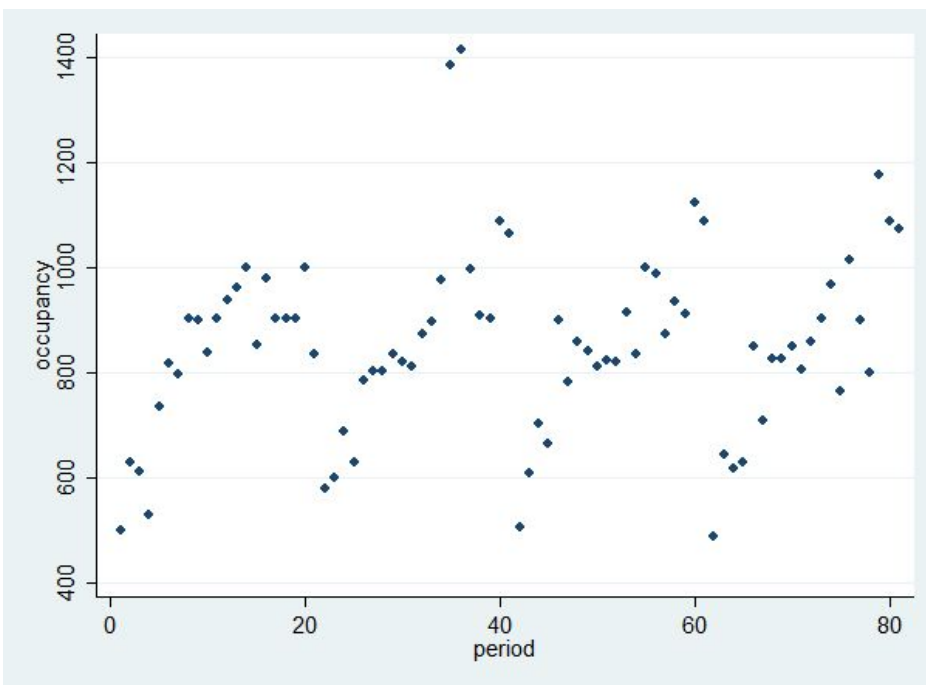Figure 1. Profit, 2000-2020. *Retrieved from Stata*

Figure 2. Occupancy, 2000-2020. *Retrieved from Stata*

According to these graphs, all the time series shown seem to be trending upward periodically, however there is no permanent trend on both graphs . So, the data in the research enable us not to forecast the values but to analyze the data through the time and find the relationship between factors and define the key ones.

The table with variables is presented in Appendix 1. The dependent variables are the number of people attend the hotel in the quarter, and the profit gained (in rubles). Independent variables are digital marketing costs, share of anti-crisis decisions of management (as a percentage of all management decisions), availability of additional services such as sauna, availability of air connection in the city, renovation and maintenance costs and number of holidays in the quarter, number of all the hotels in the city, availability of bus near the hotel's location, costs on staff education or requalification, population of the city during the period, and cost of staying for one person per night. Independent variables are chosen based on previous studies and also taking into account features of small city and the hotel itself.

2.2 Descriptive statistics

In this study, I use a time series regression analysis in order to investigate if digital marketing costs positively affect hotel's occupancy, meaning number of people visiting the hotel during the chosen period (quarter), and if anti-crisis management decisions positively affect profit of the hotel. Table 1. below presents the descriptive statistics of the dependent and independent variables used in regression analysis.

Anti-crisis management decisions present how many of overall managerial decisions can be defined as anti-crisis ones (in percent). The mean is 0,29 and the median is 0,3. It means that anti-crisis management decisions occupy about 30% of whole decisions in average.

Profit shows the profit of the hotel in quarter in rubles. The mean is 1147766 and the median is 1000675. So, it is the average earnings per quarter, and the conclusion can be made that mostly the hotel appears to earn a little less than average.

The variable "Occupancy" presents the number of guests per quarter. The mean is 853, the median is 850, and it shows a kind of stability in occupancy of the hotel through all the existing period.

The dummy variable "Availability of additional service (sauna)" was created where 1 is for availability (quarters when the guests had an opportunity to use it) and 0 if it not available. The mean is 0,51 and the median is 1. It shows that about half of the time that hotel exists the sauna was available. And it is logical as sauna was built in 2010 and never stopped working for long.

Table 1. Descriptive statistics

Variable	Obs	Mean	Median	Std. Dev.	Min	Max
Anti-crisis management decisions	81	0,29	0,3	0,1	0,1	0,5
Profit	81	1147766	1000675	351911,3	783475	2365890
Occupancy	81	853	850	174,29	489	1415
Availability of additional service (sauna)	81	0,51	1	0,5	0	1
Air connection in the city	81	0,57	1	0,50	0	1 1
Digital marketing costs	81	28956,37	15267	28987,04	5090	134560
Holidays	81	29,46	29	3,41	26	38
Renovation/ maintenance	81	158547,7	78253	220381,9	0	800000
Hotels in the city	81	38	30	20,07	24	96

Daily bus availability	81	0,09	0	0,3	0	1
Staff education	81	0,04	0,03	0,027	0	0,12
Population of the city	81	202928	202882	5194,5	193034	210501
Cost of staying	81	907,41	900	130,17	700	1100

Another dummy variable is for availability of air connection. As the city is small, there was no stable air connection for sometime. So, 1 is for availability of air connection and 0 is for non-availability. Here we can see that the mean is 0,57 and median is 1, that presents availability of air connection for most of the time.

Digital marketing costs variable show how much money is spent quarterly for digitalization, advertising, agent payments, etc. The mean is 28956,37 and the median 15267, and it means that although such costs were mostly not high, the sharp increases may occur.

There is also a variable presenting the number of holidays per quarter. The mean and median almost equal (29,46 and 29 respectively), so it is an average number of holidays and potential visiting days for guests.

Renovation/maintenance is a variable presenting the costs for different kinds of repairs. The mean here is 158547,7 and median is 78253. It implicates that mostly these costs are not high but sometimes the big repairing may appear, so spendings highly increase.

Number of hotels in the city is a variable that shows how many hotels, hostels, motels, etc. (in other words, any places available to stay in) exist in the city, or how many competitors the chosen hotel has. The mean is 38, and the median 30, presenting the average number of hotels in the city during the quarter. Mean is higher than median which means that most of the time there was number of hotels which is more than average.

The next dummy variable is bus availability presenting presence of the daily bus transportation near the hotel. The mean is 0,09 and the median is equal to 0, showing that most of the time the transportation near the hotel (precisely, bus transportation) is quite weak.

Staff education costs is a variable that shows the share of costs on requalification or educating staff from all the costs. The mean and median are 0,04 and 0,03 meaning that approximately 3-4% of all costs were spend on this needs through all the time periods.

Variable "Population of the city" present the number of citizens. The mean and the median are 202928 and 202882 respectively, which are almost equal, showing that the number of people in the city did not differ significantly through the time.

Cost of staying variable shows the cost for one bed for a person per night, presented in rubles. The mean is 907, 41, and the median is 900. So, the average price for all the 20 years did not vary a lot, remaining about 900 rubles.

2.3 Regression analysis

The time series study examines data over the number of time periods. The time series regression analysis studies, firstly, if digital marketing costs have good effect on occupancy and, secondly, if anti-crisis management decisions have good effect on profit. It examines the relationship between dependent and independent variables. In this study, the dependent variables are occupancy and profit. The independent variables will be the following: digital marketing costs, anti-crisis management decisions, availability of sauna, availability of air connection, renovation costs, number of holidays. The regressions will be controlled for different variables in two regression models according to, as was already mentioned, the features of the hotel, the city, etc. According to data and the aims, it is sufficient to use regression model analysis, before doing the necessary manipulations and data analysis.

The regressions will be applied in Stata. It is a statistical software package that allows to apply regressions, obtain statistical data, create graphics and tables for management, economic, econometric and other purposes.

After making transformation in Stata (like logarithm some variables if necessary, create new variables, etc.), the regression is applied. To assess the effect of independent variables on dependent variables, it is necessary to define the significance of them. It can be done by interpreting the P-value. P value (probability value) can be defined as the lowest significance level at which null hypothesis (in our case, it is the absence of statistical significance of variables) can be rejected. For example, p value equals to 0 means that a null hypothesis can be rejected with 100% confidence. In this bachelor thesis, the significance level of 95% was taken, meaning that if p value is less than 0,05, the coefficients are statistically significant.

3. RESULTS

In this thesis I have created two models. These two models represent the results of OLS regression. The dependent variable used in the first model is occupancy (how many people visited the hotel in the quarter), independent is digital marketing costs. In the second model dependent variable is profit of the hotel, independent is share of anti-crisis management decisions of total. For the first model the following control variables were taken: additional service sauna dummy takes a value of 1 is that it is available for guests and 0 if it is not available; air connection dummy takes a value 1 if air connection was available in quarter and 0 if not; number of weekends and holidays in quarter depends on the official state calendar and number of holidays there; anti-crisis management decisions as a share from all management decisions; number of all the hotels in the city; availability of bus transportation near the hotel dummy variable where 1 is for availability and 0 if there is no bus; costs on staff education as a percent from all the costs during the period; population of the city during the period; cost for 1 person per night at the hotel during the period. As for the second model, the followings variables were taken: additional service sauna dummy, air connection dummy, digital marketing costs, costs for renovation and maintenance, number of hotels in the city, availability of the bus near the hotel, population of the city, population of the city and cost of staff education (all the variables were described above in details). There 81 observations in both models. The R2 increases in both models from simple model with regressor and regressand to the models with adding control variables. I have made some transformations with variables where needed and run additional regressions which are not displayed here, but I will discuss it where it is relevant.

To begin with, it is necessary to describe the results of the first model where the influence of digital marketing costs on occupancy was investigated. First of all, the variables for density were checked to see if there is normal distribution or not, and new variables were made which are logarithmic digital marketing costs, logarithmic profit, logarithmic renovation costs, logarithmic number of hotels in the city. These transformations were obtained in order to make a distribution more close to normal and have clear results of regression model. So, the regression with only dependent and independent variables was created. Here is the model:

Table 2. Regression Model 1

	Model 1	
Variables	**Coefficient**	**P-value**
ldigitalmarketingcosts	150,7053	0,000
const	-639,4214	0,000
N	81	
Adj. R-squared	0,5039	

The adjusted R^2 shows how well the model is explained, and it was 0.5039 meaning that the model is explained in 50,39%. The regression results showed that the coefficient of digital marketing costs is statistically significant on the 95% confidence level as p value is 0<0,05 (the meaning was explained in the theoretical foundation part), and digital marketing costs positively influence the occupancy as coefficient is positive. According to the theory, he statistical significance appears if the p value is < 0,05. After that, it is needed to add control variables in order to see the change if different conditions exist. So, control variables added here are additional service sauna that appeared in 2010 and could affect occupancy, air connection in the city and bust connection to the hotel that also could influence the decision to visit the hotel if more means of transport are available, number of official state holidays as there could be more people attending during them, number of holidays in the city as it is a number of competitors during the period, population of the city which may present increase in the interest to the city,

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and cost of stay at the hotel as one of the key factors affecting choice of customers.   As a result, the following model was received:

Table 3. Regression Model 2

Variables	Coefficient	P-value
	Model 2	
ldigitalmarketingcosts	82,55653	0,001
additionalservicesauna	55,63404	0,202
airconnectioninPskov	85,15982	0,029
numberofofficialstateholiday	-0,3750917	0,940
lnumberofhotelsinthecity	71,03543	0,095
availabilityofdailybustransp	-41,14863	0,396
costsonreclassificationofsta	-15,18424	0,975
Pskovcitypopulationinpeople	-0,118633	0,013
Costofstayfor1personinru	-0,3552695	0,097
const	2452,235	0,027
N	81	
Adj. R-squared	0,6046	

As we can see, the R^2 increased a little and became 0,6046. The main independent variable is statistically significant with p value equals to 0,001 showing positive coefficient an, as a result, positive relation of the digital marketing costs on occupancy. As for other variables, the statistically significant coefficients with P-values less than 0,05 have the variable of air connection and the population of the city, showing positive relation for the first variable and

negative for the second one. All the other control variables appeared to be statistically insignificant. Their p values are > 0,05 that is why these variables are statistically insignificant.

The second model about influence of anti-crisis management decisions on profit was created by the same algorithm. Firstly, it was important to check the normal distribution for the variables that was done before running all the regression models. All the variables that were transformed to logarithm were mentioned above. Then, the simple regression model with dependent and independent variables was created.

Table 4. Regression Model 3

	Model 3	
Variables	**Coefficient**	**P-value**
anticrsismanagementdecisions	1,682289	0,000
const	13,42753	0,000
N	81	
Adj. R-squared	0,3066	

The adjusted R^2 was 0,3066 which is quite low, that again confirms the need of adding control variables in order to increase the value. The coefficient of independent variable was statistically significant at the 95% confidence level as p value is 0<0,05, and showed that increasing anti-crisis management decisions led to increasing profit, demonstrating very strong positive relation.

Then, control variables were added that are additional service sauna dummy that, as it was previously defined, appeared on the half of the hotel's existence and could influence the profit, air connection dummy for the same reason as in the first model, digital marketing costs as they

could also have a good effect because of the importance of digitalization in the modern world, costs for renovation and maintenance to see how bad or good the expenses which sometimes appear to be unexpectable can affect profit, number of the hotels in the city as number of competitors may influence profitability and popularity, dummy variable of bus availability (the same with the first model), population of the city by the same reason as in the previous model and costs on staff requalification which can have both positive (higher skilled staff work better) and negative (more costs lead to less profit) effect. The following model was created:

Table 5. Regression Model 4

	Model 4	
Variables	**Coefficient**	**P-value**
anticrsismanagementdecisions	0,6417658	0,011
additionalservicesauna	-0,0351948	0,596
airconnectioninPskov	0,037195	0,472
ldigitalmarketingcosts	0,2145604	0,000
lrenovationmaintenance	0,0099773	0,011
lnumberofhotelsinthecity	0,0284785	0,594
availabilityofdailybustransp	0,0308589	0,625
Pskovcitypopulationinpeople	-8,53e-07	0,842
costsonreclassificationofsta	-0,0423909	0,947
const	11,58176	0,000
N	81	
Adj. R-squared	0,6978	

So, the R^2 increased a lot becoming 0,6978, showing that model has become twice better described. As for independent variable, it is still statistically significant at 95% confidence level with p value equals to 0,011<0,05. The coefficient has decreased with appearance of control variables but stayed positive. Other control variables, except digital marketing costs appeared to be statistically insignificant with p values more than 0,05. Digital marketing costs variable is statistically significant at the 95% confidence level, and positively affect the profit. The coefficient is quite small, but anyway it is a positive relation.

So, here are two tables with the results of two regressions presenting significance of all the variables:

Table 6. Results 1

Variable	Significance at the 95% confidence level; positive/negative effect
Independent variable	
Digital marketing costs	Significant, positive effect
Control variables	
Availability of additional service (sauna)	Insignificant
Air connection in the city	Significant, positive effect
Holidays	Insignificant
Hotels in the city	Insignificant
Daily bus availability	Insignificant
Staff education	Insignificant
Population of the city	Significant, negative effect
Cost of staying	Insignificant

So, the results of the first model present that digital marketing costs variable as the main dependent one positively affect the occupancy of the hotel. It means that the more costs for

digital marketing are, the more people are attracted to the hotel. As for control variables, most of them appeared to be insignificant. However, availability of air connection showed the positive relation with occupancy, meaning that when air connection exists in the city, the occupancy of the particular hotel increases. It may be connected with location of the hotel as it is near the airport, anyway, the result was perceived. Another statistically significant coefficient was shown with the variable presented population of the city where the hotel is located, and there is negative effect. It may be explained by the desire of tourists to visit places which are not crowded and discovered, and the observed city showed the increase of citizens in last years.

To conclude, the first hypothesis is accepted and approved.

Table 7. Results 2

Variable	Significance at the 95% confidence level; positive/negative effect
Independent variable	
Anti-crisis management decisions	Significant, positive effect
Control variables	
Availability of additional service (sauna)	Insignificant
Air connection in the city	Insignificant
Digital marketing costs	Significant, positive effect
Renovation/maintenance	Significant, positive effect
Hotels in the city	Insignificant
Daily bus availability	Insignificant
Population of the city	Insignificant
Staff education	Insignificant

As for the second model, the following result was obtained. The coefficient of the main independent variable appeared to be statistically significant at the 95% confidence level which means that increasing of share of anti-crisis management decisions from all the management decisions lead to increasing of profit of the hotel. For the control variables, there are two

statistically significant coefficients. Firstly, digital marketing costs lead to increase of profit. Such a relation may be also connected with the results of the first regression model which showed that occupancy increases as digital marketing costs increase. Obviously, the more consumers come to the hotel and use its services, the more profit the hotel may gain. Another thing is renovation costs that also showed positive effect on the profit. It is quite and curious thing as costs usually seem to lead to decreasing, however the obtained result showed different. It can be interpreted as follows: renovations made in the hotel is a kind of investments in the future, meaning that repairing something old or broken lead to more pleasant appearance of the hotel, and attract more customers and guests.

To make a conclusion, the second hypothesis was also accepted and proved.

CONCLUSION

Hotel industry is one of the most profitable fields of business with a huge quantity of competitors. It is important to define the determinants of financial success of a hotel, especially of a small hotel in terms of the difficulty of small-scale businesses on the market nowadays. Determinants of financial success and proper decisions of management and owners of a hotel can help business to prosper and prevent it from entering a crisis stage of insolvency. A small hotel needs to have strong management personnel who is ready to help a company in case of hard times as well as marketing people and strategies that can help a firm to attract more clients and, thereby, earn more profit.

The purpose of the thesis is to define modern success factors that positively influence small hotel's profitability and analyze them via statistical regression. This is a research that studies determinants of financial success of a hotel business by the example of a small hotel in Russia. In this thesis the data-set has been used to analyze the association of digital marketing strategies and anti-crisis management decisions with hotel room occupancy and financial profitability of a hotel respectively.

The data in the thesis is time-series taken from accounting and financial statements of a small hotel in Russia. The sample size is 81 observations: quarterly data from 2000-2020 financial reports. Two hypotheses are proposed in the thesis based on the theoretical review of researches carried through previously. The survey was conducted by regression analysis by using OLS models. Independent variables are digital marketing strategies (the cost of a hotel on marketing strategies) and anti-crisis management decisions (the percentage of the overall management

decisions alloted to anti-crisis decisions). Dependent variables are the room occupancy and financial profitability of a hotel. There are such control variables used in regression analyses: quantity of foreigners lived in a hotel, additional services (sauna, cafe), cafe costs on products, air connection in the city, number of official state holidays and weekends, renovation/maintenance costs, number of hotels in the city, availability of daily bus transportation near the hotel, costs on reclassification of staff members (as the percentage of overall costs), the city population and cost of stay for 1 person (the price for one bed per night).

Based on the previous researches and theoretical review, following hypotheses have been proposed: (1) Digital marketing strategies are positively associated with the room occupancy. (2) Anti-crisis management decisions are positively associated with the hotel profitability.

The study supported all two hypotheses. During the research it has been found out that digital marketing strategies are positively associated with the room occupancy, which in return is a indicator of positive effect on financial profitability of a small hotel. Moreover, the research showed that anti-crisis management decisions are positively associated with the hotel profitability which influences an overall success of a hotel. The results are strongly supported by hypothesis. The purpose of the thesis to identify modern success factors that influence financial profitability of a small hotel was met.

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APPENDICES

Appendix 1. Table of variables and their definitions

Variable	Definition	Variable code	Notes
Anti-crsis management decisions	Share of anti-crisis solutions in overall management decisions	anticrisismanagementdecisions	
Profit	Profit of the hotel in the particular period	profit	
Occupancy	Number of guests during the period	occupancy	
Availability of additional service (sauna)	Availability of additional service (sauna)	additionalservicesauna	(1 - available, 0 - n\a)
Air connection in Pskov	Availability of air connection in Pskov	airconnectioninPskov	(1 - available, 0 - n\a)
Digital marketing costs	Digital marketing costs	digitalmarketingcosts	
Holidays	Number of official state holidays in Russia	numberofofficialstateholidays	
Renovation/maintenance	Renovation/maintenance expenses	renovationmaintenance	
Hotels in the city	Number of hotels in the city during the period	numberofhotelsinthecity	
Daily bus availability	Availability of daily bus transportation near the hotel	availabilityofdailybustransportation	(1 - available, 0 - n\a)
Staff education	Costs on requalification of staff members in percent from all costs	costsonreclassificationofsta	
Population of the city	Number of people living in the city during the period	Pskovcitypopulationinpeople	

Appendix 1. continued

Cost of staying	Cost of stay for 1 person per night(in rubles)	Costofstayfor1personin ru	
Logarithm profit		lprofit	created before the regression
Logarithm digital marketing costs		ldigitalmarketingcosts	created before the regression
Logarithm renovation/maintenance		lrenovationmaintenanc e	created before the regression
Logarithm hotels in the city		lnumberofhotelsintheci ty	created before the regression

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