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## **KNOWLEDGE MANAGEMENT: EVIDENCE FROM SERBIAN BANKING SECTOR**

*UDC 005.94:336.71(497.11)*

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**Abstract.** *Knowledge management is necessary in order to face the contemporary challenges in banking industry, related to hyper-competition, market differentiation and improvement of business performance. It involves several phases, and the paper focuses on the knowledge creation and knowledge sharing. Also, a brief insight into the features of an organizational culture that supports knowledge management is provided. The goals of the research are to determine the levels of knowledge creation, knowledge sharing and knowledge-supporting organizational culture, in the Serbian banking sector. After the literature review, a survey was conducted and data was processed with a statistical method. The paper contributes to the literature both in the fields of banking management and knowledge management. The findings may be useful to bank managers, because the importance of knowledge management in banks is highlighted and practical guidelines for the improvement of less developed aspects of knowledge creation and sharing are provided.*

**Key words:** *knowledge management, knowledge creation, knowledge sharing, banking management*

**JEL Classification:** M21, D83, M14, G21, G41

### 1. INTRODUCTION

Due to the highly competitive environment and the constant tendency towards maintaining and improving profitability and liquidity, financial institutions are faced with ongoing challenges, such as an urge to provide services more efficiently and manage risks involving complex and intangible elements. Dugalic (2016) identified a number of factors that will significantly shape the banks of the future, and some of them are: “*the rise of*

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*new markets, population growth in developing countries, an increasing average age of the population, urbanization, new energy sources, modern technology, etc.*“

All of these factors influence the need to make adjustments in order to meet the new market conditions. Whether the bank's competitive strategy is based on a cost leadership, market differentiation or focusing on a specific market segment, it is necessary to permanently explore and implement new ways to achieve specific goals. The precondition for solving complex problems is the successful management of knowledge. It is necessary to adapt the organizational design and culture of modern banks to the knowledge management requirements, in order to develop the new ways of providing services and to improve various processes at each organizational level. Knowledge management (KM) is a system of managerial activities related to the creation, accumulation, sharing or transfer, use and internalization of knowledge (Lee et al., 2005). The paper emphasizes the phases of knowledge creation and sharing, as important preconditions for all further activities in knowledge management.

We discuss the process of knowledge management in the specific context of the Serbian banking sector. Based on the insight into the latest available *Financial Position and Financial Performance Report of the Banking Sector in the Republic of Serbia*, it can be concluded that, although there has been a slight growth of financial indicators in recent years, this sector continues to operate in a high business risk area and is exposed to numerous pressures from the domestic and external environment (Association of Serbian Banks, 2016). Many of the issues are related to the problems that permeate the entire domestic economy, as well as the process of legal system reform, which is still in progress. The banks are trying to maintain their stability through different possibilities from regular operations, as well as from the processes of recapitalization, mergers and acquisitions. For all these activities, knowledge and information management is very important, both within the banks themselves, and between potential partners, competitors, and all other stakeholders.

The implementation of the knowledge management still faces numerous challenges, even in more developed economies, so there is an increase in the volume of research that examine KM development and various individual, organizational, technological, cultural and other factors affecting it (e.g. Islam et al., 2015; Mahmoudsalehi et al., 2012; Gupta & Govindarajan, 2000; Curado, 2008; Jayasundara, 2008; Nonaka & Takeuchi, 1995; Nonaka, 1994; Davies et al., 1995). Hence, there is still a lot of space for knowledge management improvement in companies operating in Serbia, too. The research is motivated by a tendency to contribute to domestic and foreign literature from the problem area covered, as well as to provide relevant information to banking management, in order to guide future decisions and activities more successfully.

The main goals of the research are to determine the levels of development of the knowledge creation, knowledge sharing and organizational culture that supports knowledge in the banking sector in Serbia. Also, we strive to find out whether the hierarchical level influences the processes of creating and sharing knowledge, and to formulate specific proposals and practical guidelines for improving knowledge management and knowledge culture in banks. After the literature review, the quantitative methodology was applied. The survey method was applied, and the results were analyzed using adequate statistical techniques.



## 2. THE CONCEPT OF KNOWLEDGE MANAGEMENT

Unlike the traditional resource-based perspective of an enterprise, the knowledge based view of an organization has taken the growing importance in modern strategic management, and the concept of knowledge management is especially pointed out. In fact, knowledge is a critical resource for almost all modern organizations, regardless of activity, size, age, which affects their sustainable competitive advantage. The knowledge management process consists of numerous sub-processes, which different authors classify in different ways. Generally speaking, the most striking differences are between creating knowledge, sharing knowledge, and using or applying knowledge.

*Knowledge creation* is the first phase in the knowledge management process and it is a very complex process itself, which is difficult to conceptualize, operationalize and measure. It was introduced by Nonaka et al. (1994, 2000), who developed one of the earliest theories of knowledge creation, based on three elements (*SECI model*, *Ba*, and *knowledge assets*). *Knowledge sharing or transfer* is the exchange of information between the two parties, the source, who owns and shares knowledge and the recipient, who receives or acquires knowledge (Cavaliere et al., 2015; Ma et al., 2014; Tangaraja et al., 2015). These parties are individuals and groups within the organization, but knowledge sharing can also take place among actors formally belonging to different organizations, which is especially pronounced in organizational networks and flexible organizational systems with fluid borders.

Although, theoretically, there is a distinction between the process of creating, sharing and using knowledge, as well as many other related processes and subprocesses, in practice these activities are usually carried out simultaneously and there are many interdependencies among them (Slavković, 2013). Essentially, *the use of knowledge* refers to the establishment of systems and processes that enable all other phases and sub-phases within the organization's knowledge management process.

## 3. THE IMPORTANCE OF KNOWLEDGE MANAGEMENT IN BANKING SECTOR

Banks around the world are faced with rising competition and a constant pressure to improve their market performance. In the last decades, their customers are much more demanding and it is increasingly difficult to build and maintain loyalty. Also, customers have the tendency to use the services of more than one bank and/or financial institution and to make frequent changes in their funding sources in order to achieve short-term benefits (Davies et al., 1995), which is particularly expressed in the retail banking. On the other hand, there are constant problems of small and medium-sized enterprises (SMEs) related to finding sources of funding. This problem is especially pronounced in Serbia where a large number of companies continue to operate in the high risk zone (Association of Serbian Banks, 2016, p. 10), which also increases the credit risk for banks. However, in addition to its real component, the risk in the B2B market can be caused by an informational asymmetry between enterprises and banks (Della Peruta et al., 2014; Hutchinson & Xavier, 2006), which increases the risk for banks when doing business on the B2B market. This is a risk component that can be minimized by adequate knowledge management.

Market differentiation is particularly difficult in the banking sector, bearing in mind the generic character of financial services. In addition, it is very important to maintain the good relations with many stakeholders. This requires the establishment of a balance

between different, often conflicting goals and requirements. Consequently, the banks must continuously focus on improving the efficiency and quality of each segment of the business process, and still generating innovations where it is possible.

A variety of data and information from the internal and external environment must be received and correctly interpreted in a short time, which is why it is very important to develop knowledge creation process, as a sub-phase of the knowledge management process. The knowledge can be created inside of an organization or in interaction with the external actors. Some of the important preconditions for successful knowledge creation are related to the use of electronic bulletin boards, the awareness of what information is needed for the performance of tasks, gradually bringing employees into new tasks, i.e. training employees to work on new procedures and applications, brainstorming, using different knowledge sources provided by the organization (Lee et al., 2005). In addition, management should value the new ideas coming from employees, encourage them to connect with experts outside the organization and motivate them to actively improve their competencies.

Bearing in mind the high interdependence of activities and tasks in banking, both at the same hierarchical level and between different levels and organizational units, knowledge sharing is a prerequisite for efficient and quality service delivery, risks minimization, reduction of errors and increase in customer satisfaction and loyalty, as an ultimate goal of the modern banks. It is equally important to create and share knowledge within an organization, on the one hand, and to exchange the information with the external stakeholders, such as clients, experts, regulators, media and other actors, on the other hand. According to Della Peruta et al. (2014) knowledge sharing is very important in cooperation between banks and small and medium-sized enterprises. Namely, the access to funding sources can be improved through cooperation, in particular by supporting the relationship between SMEs and the banking system, which leads to converting complex risks into the simpler ones.

Facing all these requirements in the banking sector must be supported by an adequate knowledge management system, based on advanced IC technology (Mirzaee & Ghaffari, 2018). Within the process of technology development, the Big Data softwares have emerged, that enable handling of large amounts of data that traditional applications cannot process in an adequate way. Organizations use big databases, which often include unstructured data, such as, for example, data from mobile phones, GPS maps, video surveillance cameras, etc. (Aleksić-Mirić, 2017), that are available in real time. In Big Data analytics, knowledge management plays a central role. On the one hand, knowledge management in modern organizations is not possible without the analysis of a Big Data, and on the other hand, human knowledge is up to the development of technology and people are the ones who decide how to use information generated from large databases (Pauleen & Wang, 2017). Some of the specific support systems for knowledge management, which are often used in banks, include information support systems for risk management, Decision Support Systems, Data Warehouse and Data Mining (Jayasundara, 2008). Most of the banks have implemented modern IT solutions, and science and practice are still searching for new ways to digitize banking operations. The specific challenges are related to attracting and educating customers regarding the use of electronic and mobile banking, where it is important to ensure a high quality knowledge transfer process between the bank and its customers.

In addition to the technology, there are various individual, organizational and other factors that influence the knowledge creation and sharing in general, and also in the



banking sector. However, the paper focuses on organizational culture as a factor of knowledge creation and sharing, bearing in mind the importance of the culture for the performance of financial organizations (Al-Abdullat & Dababneh, 2018; Faisal et al., 2013). Knowledge supporting culture, also known as the knowledge culture, is one of the most important conditions that ensure the effective and efficient movement of knowledge through the organization (Islam et al., 2015). Some of the most significant characteristics of the organizational culture that supports knowledge are: an accessible relationship of colleagues, a willingness to help others, but also to seek help, awareness and understanding of the importance of knowledge for the success of the company, encouraging employees to research and experiment, evaluating individual performance based on knowledge and expertise, motivation to discuss business, senior management support in terms of creating, sharing and applying knowledge.

#### 4. KNOWLEDGE CREATION AND KNOWLEDGE SHARING IN SERBIAN BANKING SECTOR: RESULTS OF THE RESEARCH

Starting from the research goals, a short survey was conducted on the sample of banks operating on the territory of the Republic of Serbia. Out of 31 banks in Serbia (National Bank of Serbia, 2018), a sample of 11 banks was selected based on the random sampling procedure. Bank managers were contacted and asked in person to distribute questionnaires to different employees (in terms of their organizational role) throughout the company, by their own random selection. This decision was motivated by the tendency to get as diverse responses as possible, since the processes of knowledge creation and sharing may differ between organizational units, roles and hierarchical positions. In consultation with managers, the authors decided to send five questionnaires per company. The respondents were informed that the survey is completely anonymous, voluntary based and that the results will be used only for the scientific research purposes. Out of the 55 distributed, we received 40 filled-in and usable questionnaires, so the response rate is 72.7%, which is a high percentage. The structure of the sample is shown in Table 1.

**Table 1** Structure of respondents according to demographic characteristics

		n	%
Gender	Male	16	40.0%
	Femaele	24	60.0%
Education	High school	5	12.5%
	College	6	15.0%
	University (BSc)	24	60.0%
	MSc/Phd	5	12.5%
Hierarchy	Employee	14	35.0%
	Manager	26	65.0%
Age	<25	2	5.0%
	26-35	13	32.5%
	36-45	14	35.0%
	46-55	6	15.0%
	>55	5	12.5%
Total		40	100%

*Source: Authors*

The questionnaire is composed of four parts and includes a total of 20 questions. The development of the questionnaire is based on the literature review, but the final structure of the questionnaire is the result of the original scientific approach of the co-authors. First, a focus group was formed consisting of co-authors of this paper and a few other university professors who discussed the existing scales and decided what items should be included in the questionnaire in accordance with the purpose and goals of research, and how to translate and adapt them to the understanding of domestic respondents in the banking sector.

The first part consists of 4 items related to knowledge creation based on the findings of Lee et al. (2005) and Mitchell and Boyle (2010). The second part includes 5 items related to knowledge sharing, adapted from Lee et al. (2005) and Liao et al. (2011). The third part of the questionnaire includes questions about an organizational culture that supports knowledge management, based on the questionnaire developed by the Gold et al. (2001). All items in the first three sections are of scalar type (five-level Likert scale). The fourth part of the questionnaire is aimed at collecting the general information about respondents, such as gender, age, position in the company and level of education, based on a closed type question.

Data processing was done using appropriate methods and techniques within the framework of the SPSS Package 20.0. The reliability of the scales *Knowledge creation*, *Knowledge sharing* and *Knowledge culture* was analyzed using Cronbach's alpha coefficient. Each of them has a high level of reliability ( $\alpha_1 = 0.887$  (4 items),  $\alpha_2 = 0.758$  (5 items),  $\alpha_3 = 0.777$  (7 items)).

For the purpose of testing the degree of knowledge creation and sharing in the Serbian banking sector, we calculated measures of descriptive statistics, arithmetic mean and standard deviation. Table 2 shows the results related to the knowledge creation. All the means are at the medium level (between 3 and 4), and the statement where the highest agreement is shown by the respondents is KC2 (Mean = 3.60). This result is in line with previous research, which shows the importance of continuous training and development of bank employees (Stojanović-Aleksić et al., 2016, p. 46), since adequate training affects employee satisfaction, and consequently organizational performance (Jones et al., 2009, p. 170). Nevertheless, there is a space for improvement in this respect, too. On the other hand, knowledge creation from external sources, specifically external associates or experts outside the bank, is insufficiently developed.

**Table 2** Knowledge Creation in the Serbian Banking Sector

No.	Item	N	Min.	Max	Mean	SD
KC1	<i>In our bank, initiatives and activities undertaken towards the generation of new ideas are valued.</i>	40	1	5	3.28	1.377
KC2	<i>My predecessor adequately introduced me to my tasks, through educational programs for employees.</i>	40	2	5	3.60	0.955
KC3	<i>Employees are encouraged to search information for tasks from various knowledge sources, eg. external experts</i>	40	1	5	3.10	1.105
KC4	<i>Employees actively promote the existing knowledge through new ideas.</i>	40	2	5	3.35	0.921

*Source: Authors*

Table 3 presents results related to knowledge sharing. The item KS6 has the highest mean (4.18), which indicates the consciousness of the link between knowledge sharing and organizational performance. Namely, employees in banks firmly believe that knowledge

sharing increases the efficiency of the tasks. However, the perception about the existence of a reward system for knowledge sharing is significantly less developed (Mean = 2.75). Thus, we can notice that employees in banks share knowledge primarily on the basis of personal initiative and on an ad-hoc basis, rather than as a result of the designed managerial approach. This segment should be improved, starting from the managerial level.

**Table 3** Knowledge Sharing in the Serbian Banking Sector

No.	Item	N	Min	Max	Mean	SD
KS5	<i>My colleagues and I share the information and knowledge needed to carry out our tasks.</i>	40	2	5	4.08	0.694
KS6	<i>We improve task efficiency by sharing information and knowledge.</i>	40	3	5	4.18	0.675
KS7	<i>In our bank, there are developed information systems, such as intranets or electronic bulletin boards, for sharing information and knowledge.</i>	40	2	5	3.80	0.939
KS8	<i>We promote the sharing of information and knowledge with other teams in the bank.</i>	40	2	5	3.82	0.984
KS9	<i>In our bank, there is a system for rewarding knowledge sharing.</i>	40	1	5	2.75	1.032

Source: Authors

We applied the *Mann Whitney U Test* (Table 4) to compare statistically significant differences between two independent groups (employees and managers). This nonparametric test is applied because the variables do not follow the normal distribution, and the sample is big enough in relation to the entire population. The test is significant if the value of the indicator *p* is less than or equal to 0.05. Based on the test results, the following conclusions can be drawn:

- there are statistically significant differences ( $p < 0,05$ ) in the level of knowledge creation and sharing between employees and managers;
- the statistically significant differences are present in all individual items within the *Knowledge Creation* scale;
- the statistically significant differences are identified in items marked as KS7 and KS8 within the *Knowledge Sharing* scale.

**Table 4** Differences in knowledge creation and sharing depending on the hierarchical level

Item	Knowledge Creation	KC1	KC2	KC3	KC4	KC5
<i>Mann-Whitney U</i>	58.0	69.0	81.0	54.0	87.0	127.00
<i>Wilcoxon W</i>	163.0	174.0	186.0	159.0	192.0	232.00
Z	-3.538	-3.288	-3.026	-3.760	-2.846	-1.781
p	0.000*	0.001*	0.002*	0.000*	0.004*	0.075
Item	Knowledge Sharing	KS6	KS7	KS8	KS9	
<i>Mann-Whitney U</i>	71.00	113.00	97.00	91.500	130.500	
<i>Wilcoxon W</i>	176.00	218.00	202.00	196.500	235.500	
Z	-3.187	-2.163	-2.577	-2.747	-1.562	
p	0.001*	0.031	0.010*	0.006*	0.118	

Source: Authors

After we identified the statements in which there are statistically significant differences, it was necessary to determine which category of respondents expressed a higher level of agreement with them. Therefore, the medians were calculated and the results are shown in the Table 5. It can be noted that all the results are higher when respondents are managers. When it comes to knowledge creation, the differences are bigger in KC1 and KC3, and somewhat lower in KC2 and KC4. Thus, it can be concluded that managers in banks consider that their creativity and innovation are valued, while employees considerably less agree with this statement. In addition, bank managers believe that employees are encouraged to connect with experts outside the organization, while the employees much less agree with it. When it comes to the knowledge sharing, there is also a greater agreement with the statements shown by managers, although the differences are not so pronounced.

**Table 5** Comparison of the knowledge creation and sharing between employees and managers

	Hierarchical level			
	Employee		Manager	
	N	Median	N	Median
<i>KC1 - In our bank, initiatives and activities undertaken towards the generation of new ideas are valued.</i>	14	2.00	26	4.00
<i>KC2 - My predecessor adequately introduced me to my tasks, through educational programs for employees.</i>	14	3.00	26	4.00
<i>KC3 - Employees are encouraged to search information for tasks from various knowledge sources, eg. external experts</i>	14	2.00	26	4.00
<i>KC4 - Employees actively promote the existing knowledge through new ideas.</i>	14	3.00	26	4.00
<i>Knowledge creation – total</i>	14	2.50	26	3.75
<i>KS7 - In our bank, there are developed information systems, such as intranets or electronic bulletin boards, for sharing information and knowledge.</i>	14	3.00	26	4.00
<i>KS8 - We promote the sharing of information and knowledge with other teams in the bank.</i>	14	3.00	26	4.00
<i>Knowledge sharing – total</i>	14	3.40	26	4.00

Source: Authors

Based on the data presented in Table 5, it can be concluded that this result is consistent with the attitude that knowledge management in banks is considerably more developed at higher hierarchical levels than in the lower ones.

## 5. KNOWLEDGE-SUPPORTING CULTURE IN SERBIAN BANKING SECTOR: RESULTS OF THE RESEARCH

The previous literature review leads to a conclusion that the organizational culture of enterprises is an important factor in the development of the knowledge creation and knowledge sharing. Namely, it is necessary to develop such a culture, which encompasses components (e.g. values, beliefs, norms, symbols) that support the concept of knowledge

management. Therefore, for the purposes of this research, we applied the scale, composed of 7 items, which relate to the characteristics of the knowledge culture, and the results are shown in Table 6.

**Table 6** Organizational culture that supports knowledge management

No.	Item	N	Min	Max	Mean	SD
C10	<i>My colleagues are very approachable.</i>	40	2	5	3.78	1.050
C11	<i>Employees understand the importance of knowledge for the success of a bank.</i>	40	2	5	4.25	0.870
C12	<i>Employees are encouraged to explore and experiment.</i>	40	1	5	3.12	0.966
C13	<i>Employees are valued on the basis of their knowledge and expertise.</i>	40	1	5	3.15	1.272
C14	<i>Employees are encouraged to seek help from others when they need it.</i>	40	2	5	3.48	0.784
C15	<i>Employees are encouraged to discuss the business with colleagues.</i>	40	2	5	3.15	0.921
C16	<i>Senior management set clear vision and emphasized the importance of knowledge for the success of our bank.</i>	40	2	5	3.63	0.868

Source: Authors

The results show that the knowledge culture in the banking sector is at the medium level, and that there are differences in the development of certain components of this culture. Namely, the best estimated item is: "*Employees understand the importance of knowledge for the success of a bank*" (Mean = 4.25), which is a good prerequisite for knowledge creation in banking sector. However, there is a significantly lower average for the following items: C12 (Mean = 3.12); C13 (Mean = 3.15) and C15 (Mean = 3.15). It can therefore be assumed that employees, although having a relatively developed awareness of the importance of knowledge and good communication to colleagues, are not motivated or encouraged enough to manage knowledge.

## 6. CONCLUSION

Knowledge is the most important and unique source of sustainable competitive advantage in the era of knowledge economy (Nonaka & Takeuchi, 1995). Knowledge creation and knowledge sharing influence the improvement of the service quality, shortening the time needed to perform tasks, creating the conditions for developing new ideas, which increases both the effectiveness and efficiency of the bank. Bearing in mind the significance of these processes, the paper focuses on identifying the level of knowledge creation and sharing in the Serbian banking sector, with a special emphasis on the differences in the level of development of these processes between managers and employees. In addition, as a relevant knowledge management factor, the degree of development of an organizational culture that supports knowledge is examined.

The findings of an empirical study indicate the medium level of the knowledge creation. Banking management devotes a lot of attention to the development of

knowledge through the programs of training and professional development. Also, it can be noted that the employees strive to actively improve their competencies. It is necessary to continue with this practice and to further develop it, in order to make the advancement from a very good to the excellent level. On the other hand, less knowledge is created through networking or connecting with external sources of knowledge, such as, for example, external associates. Encouraging employees to connect with experts outside the organization is one of the challenges that management needs to face in the future period.

When it comes to knowledge sharing, there is a high level of deviation of the individual statements' scores from the overall average score. Namely, the respondents assessed better the degree of knowledge sharing and the benefits of sharing information with colleagues, while the results are lower for the ICT support for knowledge sharing. The results are the lowest when it comes to the system for rewarding knowledge sharing.

Both knowledge creation and sharing are more developed at the managerial level. However, it is not possible to make a general conclusion about the *cause* of such a gap between the hierarchical levels, so it would be interesting to further analyze the factors that lead to these differences in future research. It can only be assumed that the reasons are diverse, linked to individual factors, such as, for example, personal characteristics, level of education or organizational factors - leadership style, motivation system, communication and more. Still, it is possible to refer certain recommendations and guidelines to the banking management in Serbia in terms of encouraging the knowledge creation and sharing at lower levels. Although creativity and innovativeness of all employees is not essential in carrying out banking activities, it is very important to take into account the opinions and ideas of employees regarding how to perform tasks, relationship with clients, communication with colleagues and many other issues. If management shows interest in suggestions and ideas of employees and allows them to participate in decision-making regarding their work, i.e. if the level of vertical specialization is reduced at lower hierarchical levels, the process of knowledge creation can be improved. Additionally, although managers are in charge of establishing cooperation with external parties, they should also motivate employees to participate in such forms of cooperation through an active support and exchange of contacts, in order to enrich the knowledge not only from internal but also from external sources.

One of the essential incentive factors for knowledge creation and sharing is an organizational culture that supports knowledge. The results of the survey show that certain elements of organizational culture create a good base for the knowledge management in Serbian banking sector. Those elements are the awareness of the importance of knowledge both for employees and management and good communication with colleagues, but there is still a potential for the further improvement and development. In this respect, the roles of leaders in banks are significant. They should encourage and motivate employees in the right way to acquire, share and apply knowledge. It is very important to develop an environment in which there are equal conditions for everyone and where people are valued on the basis of their knowledge and expertise. Leaders and managers should evaluate and value both tacit and explicit components of employees' knowledge. Future consideration on the employee performance evaluation should be focused on incorporating intangible intellectual capital factors, in addition to the hard, quantitative indicators.

Knowledge management has not been explored enough in the banking sector, and especially not in Serbia. The findings in this paper provide a significant contribution to

the literature, both in the fields of banking management and knowledge management. We highlight the importance of the problem area and point to a number of issues and problems that need to be further explored in order to properly manage the knowledge as a resource in banks. On the other hand, the practical implications of research are reflected in providing information to the bank managers in Serbia about the level of development of the knowledge creation, knowledge sharing and knowledge culture. It is possible to identify the specific elements of the observed processes and culture, which are at a high, medium and low level, and accordingly direct future efforts to improve the knowledge management, with the aim of improving the quality of providing banking services and achieving a sustainable competitive advantage.

In addition to significant contributions, there are certain limitations. First of all, the empirical study shows the level of knowledge creation, knowledge sharing and knowledge culture in Serbian banking sector, but the factors that affect them are not explored. Therefore, future research should consolidate the findings through the investigation of different individual, organizational and technological factors of knowledge management in banks. The second limitation stems from the known shortcomings of the survey, as data collection techniques, and above all from the subjectivity of the respondents and the impossibility of reaching more extensive responses and better observations. The sample accounts for about 37% of the total number of banks in Serbia, which is a relatively large sample, but there is still a probability of making mistakes, as well as the possibility of expanding the database of respondents in the future. Fourthly, the research was carried out at a single point of time, which makes it difficult to monitor the dynamics of the knowledge management process.

Despite the limitations, the paper is a good basis for future research, as it points to a number of relevant research questions, such as: whether and how the knowledge creation and sharing in the banking sector affect the degree of knowledge application, why there are differences in the knowledge creation and sharing between the hierarchical levels, what is the extent of the influence of knowledge culture on the knowledge management in banks, what are the other factors that determine the level of knowledge management in banks, etc. These and many other issues once again point to the importance of the topic and motivate researchers to continue looking for answers and providing guidance to managers in solving everyday problems in a modern business environment.

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## **UPRAVLJANJE ZNANJEM U BANKARSKOM SEKTORU REPUBLIKE SRBIJE**

*Suočavanje sa savremenim izazovima u bankarskom sektoru, vezanim za hiperkonkurenciju i sve teže tržišno diferenciranje, kao i održavanje i unapređenje poslovnih rezultata, zahteva podršku odgovarajućeg sistema upravljanja znanjem. Upravljanje znanjem uključuje više faza, a u radu je poseban akcenat stavljen na kreiranje i deljenje znanja. Pored toga, rad pruža kratak uvid u karakteristike organizacione kulture koja podržava upravljanje znanjem. Osnovni ciljevi istraživanja jesu da se utvrde nivoi razvijenosti kreiranja znanja, deljenja znanja i organizacione kulture koja podržava znanje u bankarskom sektoru u Srbiji. Pored pregleda literature, sprovedena je anketa, nakon čega su podaci obrađeni statističkim metodom. Rad pruža doprinos literaturi, kako iz oblasti bankarskog menadžmenta, tako i upravljanja znanjem. Saznanja do kojih se dolazi mogu biti korisna i menadžerima banaka, jer se osvetljava značaj upravljanja znanjem u bankama i ukazuje na razvijene, manje razvijene i nedovoljno razvijene aspekte procesa kreiranja i deljenja znanja, pružajući praktične smernice za unapređenje istih.*

**Ključne reči:** *upravljanje znanjem, kreiranje znanja, deljenje znanja, bankarski menadžment*



## **THE INFLUENCE OF PSYCHOLOGICAL CONTRACT BREACH ON JOB SATISFACTION**

*UDC 005.32:331.101.32*

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**Abstract.** *Psychological contract represents the implicit assumptions of the employees (or employer) regarding the content of their mutual exchange in addition to those that are specified in the formal employment contract. In the case of breaching it, many negatively consequences could arise. One of them is the lower level of job satisfaction. In the study that has been conducted we tried to find out the answer whether the psychological contract breach in unfavorable economic conditions negatively influences job satisfaction as it has been found in most studies conducted in developed countries. The research method that we used was the case study method. In order to test the hypothesis, we used ANOVA test and linear regression. The results of the study showed that psychological contract breach negatively influences job satisfaction of employees despite the unfavorable economic conditions in which they work.*

**Key words:** *psychological contract, breach, job satisfaction, employees.*

**JEL Classification:** J28, J29, J41

### INTRODUCTION

Relationship between an employer and an employee is primarily defined by the contract which both parties have to sign up before the employment agreement starts. By signing it, both parties confirm that they agree with the contract terms, i.e. with the obligations and rights that stem from this contract. However, both parties included in this relationship could also form additional expectations regarding their future exchange. These expectations are implicit and, hence, do not have to be signed in any document. The employers' additional expectations regarding the mutual exchange usually refer to

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that the employees should be loyal to the company, that they will work overtime when it is necessary, etc. When it comes to the additional expectations of the employees, they usually refer to the future promotions, job security, earnings, etc. These implicit expectations are an integral part of the so called *psychological contract* (Argyris, 1960; Levinson *et al.*, 1962; Rousseau, 1989; Robinson & Rousseau, 1994; Morrison & Robinson, 1997).

The basic characteristic of this contract is that it has no written form. From this fact steams another one: it has no legal strength. Therefore, in the case of breaching there will not be any legal consequences. But nevertheless, many negative effects could also appear. In many studies it was found that psychological contract breach caused a lower trust of the employees (Robinson & Rousseau, 1994; Morrison & Robinson, 1997; Raja *et al.*, 2004), lower commitment (Rousseau, 1990; Robinson *et al.* 1994; Anderson & Schalk, 1998; Robinson & Morrison, 1995; Cassar & Briner, 2011), reduced motivation (Pines, 2002; Parzefall & Hakanen, 2010), decreased performance (Turnley *et al.*, 2003; Zhao *et al.*, 2007), higher absenteeism (Hackett, 1989; Griffeth *et al.*, 2000) and higher turnover intentions (Robinson & Rousseau, 1994; Zhao *et al.*, 2007; Suazo, 2009; Hess & Jepsen, 2009) etc.

One of the negative consequences resulting from the psychological contract breach is decrease of employees' job satisfaction as well. Job satisfaction is a phenomenon that reflects how employees feel towards their job in general or some aspects of the job (work tasks, salary, promotion and other incentives, working conditions, relationship with co-workers and job security) (Spector, 1997). Many studies, that have been conducted so far, have confirmed that when employees experience the psychological contract breach, their job satisfaction decreases (Robinson & Rousseau, 1994; Knights & Kennedy, 2005; Zhao *et al.*, 2007; Suazo, 2009). However, regarding these studies one important fact arises: these kinds of researches were mostly done in developed countries and are quite rare in developing countries, such as Serbia. On the other hand, the context in which employees work in developing countries is quite different comparing to the developed countries. In developing countries unemployment rate is usually much higher than in developed countries, while the living standard is at the lower level<sup>2</sup>. As a consequence of these unfavorable economic conditions, many highly educated people in developing countries accept the jobs that are under their capabilities. Yet, these jobs provide them financial resources for everyday living. Having in mind all these facts, the question that arises here is whether psychological contract breach in developing countries influences job satisfaction in the same way as it does in developed countries (negatively), or since in developing countries it is hard to get any kind of job, psychological contract breach does not negatively influence job satisfaction.

In order to find out the answer to these questions, the authors of the paper carried out an empirical research. It was conducted by the case study method. The paper is structured as follows: In the first part of the paper, the literature reviews on psychological contract and job satisfaction is given. In the second part, the methodology of the research, the

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<sup>2</sup> According to the data of Statistical Office of the Republic of Serbia, the unemployment rate in Serbia for the last few years has been between 15% and 20%, while in the USA, where most of the research has been done, it was around 4,3 % (United States Department of Labor, Bureau of Labor Statistics, 2017). When it comes to the average net salary, in Serbia in October 2017 it was around \$ 460 (Statistical Office of the Republic of Serbia, 2017), while median weekly earnings of full-time wage and salary workers in USA in the third quarter of 2017 were \$ 859 (United States Department of Labor, 2017).

research results and their discussion are presented. The final part of the paper refers to the practical implication of the paper and concluding remarks.

## I. LITERATURE REVIEW

### 1.1. Psychological contract

The term “psychological work contract” was used for the first time by Argyris (1960). He perceived the psychological contract as an implicit agreement between employees and their supervisors regarding the exchange that would happen between them. Levinson *et al.* (1962) also highlighted that psychological contract refers to the mutual expectations between an employee and the employer, but suggested that each party may not even be aware of their own expectations since they could have subconscious background (Levinson *et al.*, 1962). Schein (1978) also made a significant contribution to the conceptualization of the psychological contract. He stated that psychological contract is “a set of unwritten reciprocal expectations between an individual employee and the organization” (Schein, 1978, p. 48) stressing that there is a match in expectations between employee and organization. This congruence, on the other hand, is crucial to attaining many positive outcomes such as job satisfaction, commitment and performance (Coyle-Shapiro *et al.*, 2008).

Probably the most significant contribution to the development of the theory of the psychological contract in recent period was given by Denise Rousseau. She was the first one who defined the psychological contract from an individual’s perspective, stating that it represents “an individual’s belief regarding the terms and conditions of a reciprocal exchange agreement between that focal person and another party (usually between an employer and an employee)” (Rousseau, 1989, p.123). Later, she simplified her first definition, stating that psychological contract in “an individual’s beliefs regarding reciprocal obligations” (Rousseau, 1990, p. 390) and suggesting that the parties in the relationship do not necessarily need to agree on the content of the contract.

The general opinion in the literature is that there are two basic types of psychological contract. These are the “old” psychological contract and the “new” psychological contract. The basic feature of the “old” psychological contract is employees’ beliefs that if they work hard, adequately fulfill their obligations to the employer and contribute to the achievement of company’s goals, they can count on job security (Dunahee & Wangler, 1974; Rousseau 1989; Sims, 1994; Makin *et al.* 1996; Singh, 1998). However, after the 80s of the 20<sup>th</sup> century, when many companies went through mergers, acquisitions and downsizing processes (and consequently many employees were laid off), employees started to form the “new” psychological contract. Its fundamental characteristic is that employees can not count on job security anymore, but the best that they can get from the employers are fair salary and opportunities for personal growth (Sims, 1994; Robinson *et al.*,1994; Kissler, 1994; Sparrow, 1996; Hiltrop, 1996; Schalk & Roe 2007).

Psychological contracts could also be distinguished upon whether financial or relational elements dominate in their content. Accordingly, there are two types of psychological contracts: transactional and relational (MacNeil, 1980; Rousseau, 1990; Robinson *et al.*, 1994). Since any psychological contract is not purely transactional or relational, recently two additional forms have been identified. These are balanced psychological contract (it has the

same characteristics as relational psychological contract, but also contains financial elements) and transitional psychological contract (it forms in the period of a crisis or when a company is undergoing some radical organizational changes) (Rousseau, 2004).

The most important issue from the employees' perspective is whether their expectations are fulfilled. If that is not the case, their psychological contract is, actually, breached. Some authors insist on a distinction between two terms – violation and breach of psychological contract. According to Morrison and Robinson (1997) “perceived breach refers to the cognition that one’s organization has failed to meet one or more obligations within one’s psychological contract in a manner commensurate with one’s contributions” (Morrison & Robinson, 1997, p. 230). Therefore, perceived breach represents a cognitive assessment of contract fulfillment, based on an employee’s perception. On the other hand, term violation refers to the “emotional and affective state that may, under certain conditions, follow from the belief that one’s organization has failed to adequately maintain the psychological contract” (Morrison & Robinson, 1997, p. 230). Thus, violation is considered as an emotional experience.

Perceived psychological contract breach may occur for many reasons, but two main causes are identified: renegeing and incongruence (Morrison & Robinson, 1997). Renegeing refers to the situation when organizational agents knowingly fail to meet their obligations and promises towards an employee. It occurs either because the organization is unable to fulfill given promises or because it is unwilling to do so. Incongruence, on the other hand, is a situation when an employee and agents of the organization have different understanding about the mutual obligations and promises. These different perceptions usually appear due to the complexity and ambiguity of reciprocal obligations and expectations, bad communication between employees and organizational agents and disparity in cognitive schemata they possess.

## **1.2. Job satisfaction**

Job satisfaction as a phenomenon could be seen as a global feeling about a job or as a constellation of the attitudes about various aspects of a job (Spector, 1997). It could also be defined as a result of a cognitive, affective and evaluative reaction of an individual on various dimensions of job (Judge et al., 2001). However, the most cited definition of job satisfaction in literature is probably Locke’s definition who states that job satisfaction is "a pleasurable or positive emotional state resulting from the appraisal of one’s job or job experiences" (Locke, 1976, p. 1304).

Very useful opinions that enable understanding of this concept are also the opinions of McShane (2004) and Fako *et al.* (2009). According to McShane (2004), job satisfaction represents the level of divergence between what a worker expects to receive and what he/she actually experiences in the workplace (McShane, 2004). Furthermore, Fako *et al.* (2009) state that if one expects little and gets little, he/she would be satisfied as much as one who expects a lot and gets a lot. On the other hand, if one expects a lot and gets little, he/she would be dissatisfied (Fako *et al.*, 2009).

Job satisfaction is a very complex phenomenon which could be influenced by various factors. Based on their nature, there are three basic models which explain the causality of job satisfaction. These models are: situational model, dispositional model and interactional model (Judge & Klinger, 2008). The situational model of job satisfaction is based on the premise that



job satisfaction stems from the job characteristics or other aspects of the work environment. According to this model, job satisfaction could be influenced by the salary, job tasks, possibilities for promotion, relationship with co-workers etc. (Spector, 1997; Giri & Kumar, 2010; Hauff *et al.*, 2015). On the other hand, the dispositional model is based on the premise that certain relatively stable personal characteristics influence job satisfaction regardless of the job characteristics and situation. Judge and his colleagues (1998), for example, proposed that there are four personal characteristics that determine one's disposition towards job satisfaction. These are: self-esteem, general self-efficacy, locus of control and neuroticism (Judge *et al.*, 1998). These authors state that higher levels of self-esteem and general self-efficacy lead to higher job satisfaction. In addition, they also found that job satisfaction is associated with internal locus of control and lower level of neuroticism (Judge *et al.*, 1998). Finally, the interactional model of job satisfaction is based on the premise that the fit between a person and the environment influences job satisfaction (Chatman, 1989).

One of the situational factors which have a proven negative effect on employees job satisfaction is breaching of their psychological contract. This has been confirmed in numerous studies that have been conducted in developed countries so far (Robinson & Rousseau, 1994; Knights & Kennedy, 2005; Zhao *et al.*, 2007; Suazo, 2009). However, the context in which employees work in developed countries is quite different comparing to the context of work of employees in developing countries. In developing countries, the employees are faced with high rate of unemployment, low living standard etc., so the question that arises here is whether psychological contract breach in such context influences job satisfaction of employees in the same way as it does in developed countries - negatively. In order to find out the answer to this question the hypothesis that will be tested in our research are as follows:

*H1: There is a negative relationship between psychological contract breach and job satisfaction.*

*H2: Psychological contract breach influences negatively job satisfaction of the employees in the context of high unemployment rate and low living standard.*

## 2. METHODOLOGY OF RESEARCH

*Method of the research.* For the purpose of testing the above hypothesis, an empirical research has been conducted. Empirical research has been carried out by the case study method. This method was chosen since such empirical research has not been conducted on the territory of the Republic of Serbia so far, and since this research is the first phase of a more comprehensive one.

*Content of the research.* The research has been conducted in the company *Aura* which was founded in 1996 in Nis as a company for the production and sale of cosmetics. Nis is one of the largest cities in Serbia where the unemployment rate is very high, especially among the younger people. A few decades ago, this city was the center of electronic, mechanical and tobacco industry, with some of the most successful companies of that time. However, since the 90s, due to the transition process, the country went through many economic and political challenges. The industry collapsed and around 40.000 people in Nis have lost their jobs. The city was faced with catastrophic economic situation

and has not been able to recover ever since. Although the number of unemployed has slightly decreased in the last couple of years, mainly because of the foreign investors and their companies, it is still very high.

*Research variables and instruments.* Regarding the psychological contract breach, we used the questionnaire created by Robinson & Morrison (2000). For gathering the data about job satisfaction, we used the questionnaire created by Eisenberger *et al.* (1997). Each item in questionnaires was assessed using five-point Likert scale, ranging from 1 – strongly disagree, to 5 – strongly agree. An answer of 4 or more points expresses high level of agreement, answer of 3 points indicates neutral opinion, while low level of agreement is expressed by an answer below 3 points. Since there were reverse questions in the part of psychological contract breach questionnaire, a reversal of initial coding was applied during the analysis.

*Data collection techniques and instruments.* The number of questionnaires that were distributed was 100. The questionnaires in paper form were distributed during May of 2017. The response rate was 60%. There was no missing data and all returned questionnaires were used and analyzed.

*Sample characteristics.* The demographic characteristics of the respondents are presented in the Table 1.

**Table 1** Respondent Characteristics

Variable	Frequency	Percent
Gender	60	100
Male	16	26.7
Female	44	73.3
Age	60	100
<25	2	3.3
26-40	28	46.7
41-55	26	43.3
>55	4	6.7
Education	60	100
III level	8	13.3
IV level	32	53.3
VI level	2	3.3
VII level	16	26.7
VIII level	2	3.3
Work experience in current job	60	100
<1 year	2	3.3
1-5 years	20	33.3
6-10 years	2	3.3
11-20 years	34	56.7
21-30 years	2	3.3

*Source:* Authors' calculations

*Analyses and procedures.* The collected data were analyzed using the program IBM SPSS, version 23. Regarding the purpose and objectives of the research we used ANOVA test and linear regression.

### 3. THE RESULTS AND DISCUSSION

In order to evaluate internal consistency of the instruments, Cronbach's alpha coefficient was calculated. The Cronbach's alpha coefficient of job satisfaction was 0.75 while for psychological contract breach it was 0.83. In both cases the values of calculated coefficients indicated that the instruments have sufficient internal reliability.

The questionnaire created by Robinson & Morrison (2000) with five items was used to measure the level of psychological contract breach of the participants. The following table presents the minimum, the maximum and the mean values, as well as the standard deviation of each item in the questionnaire.

**Table 2** Descriptive statistics of the items measuring psychological contract breach

Item	N	Minimum	Maximum	Mean	SD
1. Almost all of the promises made by my employer during recruitment have been kept so far.	60	1.00	4.00	1.80	.92
2. I feel that my employer has come through in fulfilling the promises made to me when I was hired.	60	1.00	4.00	1.77	.81
3. So far my employer has done an excellent job of fulfilling their promises to me.	60	1.00	5.00	1.87	1.00
4. I have not received everything promised to me in exchange for my contributions.	60	1.00	4.00	2.23	1.06
5. My employer has broken many of their promises to me even though I have upheld my side of the deal.	60	1.00	3.00	1.83	.69

*Source:* Authors' calculations

Table 2 presents original items that were set in questionnaire spread to the case study participants. Since the main aim of the questionnaire was to measure the level of psychological contract breach, the first three questions are reformulated in order to achieve negative formulation of all items. So, when reverse coding was done, answer of 5 points became 1 point on 5-point Likert scale used in this research. Right side of table 2 shows descriptive statistics for re-coded answers to first three items and for original answers to statements 4 and 5. It is notable in four of five questions that total breach of psychological contract does not exist. Although, there is an answer of 5 points to question 3, the mean of this question is around same level as mean of other questions. The mean of all five items is lower than 3 and with all negatively formulated statements that means the employees believe that the employer fulfilled their expectations.

The following table presents descriptive statistics of the items defined by Eisenberger *et al.* (1997) for measuring the job satisfaction of employees.

Table 3 shows that in the company *Aura* there are employees who are totally dissatisfied with their job (the items 2, 3, and 4 are assessed with 1 point). However, there are also employees who are very satisfied with their job (all the items in the questionnaire are assessed with 5 points by certain employees). The presented data show that the first item has the least mean value - 3.73 (if a good friend of his/her said that he/she is interested in working in a job like his/hers, he/she would strongly recommend it). The

mean values of the other answers are 4 points, or higher, indicating the high level of job satisfaction.

**Table 3** Descriptive statistics of the items measuring job satisfaction

Item	N	Minimum	Maximum	Mean	SD
1. If a good friend of mine told me that he/she was interested in working in a job like mine I would strongly recommend it.	60	2.00	5.00	3.73	.82
2. All in all, I am very satisfied with my current job.	60	1.00	5.00	4.27	.90
3. In general, my job measures up to the sort of job I wanted when I took it.	60	1.00	5.00	4.00	1.07
4. Knowing what I know now, if I had to decide all over again whether to take my job, I would.	60	1.00	5.00	4.33	.88

*Source:* Authors' calculations

Following table represents the minimum, maximum and the mean value of psychological contract breach and job satisfaction and their standard deviations.

**Table 4** Descriptive statistics of studied variables

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Psychological contract breach	60	1.00	3.80	1.90	.70
Job satisfaction	60	1.50	5.00	4.08	.71

*Source:* Authors' calculations

Table 4 shows that the mean value of psychological contract breach is 1.90 points which indicates relatively high level of perception that the employer fulfilled the expectations employees had. On the other hand, the mean value of job satisfaction is 4.08 points which represents relatively high level of job satisfaction. Standard deviations for both variables are close to 1, which is at an acceptable level.

In order to test the hypothesis H1, we calculated the correlation between psychological contract breach and job satisfaction.

**Table 5** Correlation between psychological contract breach and job satisfaction

		Psychological contract breach	Job satisfaction
Psychological contract breach	Pearson Correlation	1	-.479**
	Sig. (2-tailed)		.007
	N	60	60
Job satisfaction	Pearson Correlation	-.479**	1
	Sig. (2-tailed)	.007	
	N	60	60

\*\* . Correlation is significant at the 0.01 level (2-tailed).

*Source:* Authors' calculations

Table 5 shows that the Pearson correlation coefficient is  $-.479$ ,  $p < .01$  indicating that there is a negative correlation between psychological contract breach and job satisfaction of the employees.

Based on these results, it can be concluded that the research hypothesis H1, which states that there is a negative relationship between psychological contract breaches and job satisfaction, is confirmed. That means that as the level of psychological contract breach increases, the level of job satisfaction decreases.

For the purposes of this study, Pearson correlation coefficient values of  $\pm .10$  represent a small effect,  $\pm .30$  is a medium effect and  $\pm .50$  is a large effect (Cohen, 1992). The results of study show that psychological contract breach is significantly and negatively related to job satisfaction ( $p < .01$ , medium practical effect).

In order to investigate if there is the effect of psychological breach on job satisfaction, the linear regression coefficient was calculated (Table 6).

**Table 6** Regression analysis of studied variables

Model Summary								
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate				
1	.479 <sup>a</sup>	.230	.216	.61884				
a. Predictors: (Constant), Psychological contract breach								
ANOVA <sup>a</sup>								
Model		Sum of Squares	df	Mean Square	F	Sig.		
1	Regression	6.622	1	6.622	17.291	.000 <sup>b</sup>		
	Residual	22.212	58	.383				
	Total	28.833	59					
a. Dependent Variable: Job satisfaction								
b. Predictors: (Constant), Psychological contract breach								
Coefficients								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error				Beta	Lower Bound
1	(Constant)	4.995	.233		21.406	.000	4.528	5.462
	Psychological contract breach	-.480	.115	-.479	-4.158	.000	-.711	-.249
a. Dependent Variable: Job satisfaction								

Linear regression analysis in Table 6 shows that R value =  $.479$  represents the correlation between psychological contract breach and job satisfaction. R Square =  $.230$  indicates that 23.0 % change in job satisfaction is due to psychological contract breach.  $F = 17.291$ , is significant at the 0.000 level ( $p < .05$ ), shows that there is a model fit between psychological contract breach and job satisfaction. Regression coefficient (B) of psychological contract

breach of -.480 shows that 1 unit change in psychological contract breach will bring -.480 unit changes in job satisfaction.

Based on these results, it can be concluded that hypothesis H2 is confirmed, i.e. psychological contract breach negatively influences job satisfaction of the employees in the context of high unemployment rate and low living standard.

Although the sample in our research was small, comparing to the samples in similar studies conducted in developed countries, the results that we obtained are to some extent similar to the results that many other authors have found in their studies. For example, Zhao *et al.* (2007) also found that psychological contract breach is strongly correlated with job satisfaction ( $r = -.54$ ) indicating that as the level of psychological contract breach increases, the level of job satisfaction decreases. Furthermore, the results of our study are similar to the results of the study conducted by Suazo (2009). In this study, it was found that psychological contract breach is relatively strongly related to job satisfaction ( $r = -.40$ ). Suazo (2009) also found that psychological contract breach affects significant amount of variance of job satisfaction. He found that psychological contract breach explains 20 percent of variance in job satisfaction. The results of the study that we conducted are also similar to the results of the study conducted by Xiaoqing and his colleagues (2015). They have found that psychological contract breach has negative effect on job satisfaction ( $r = -0.39$ ). They have also found that 15.5 percent of change in job satisfaction is due to psychological contract breach.

The findings in our research, that are supported by the literature, suggest that the employees, even though working in the conditions of high unemployment and low living standard, if they perceive that their expectations are not met by the employer, they will be less satisfied with their job.

## CONCLUSION

In this paper, we analyzed the relationship between the psychological contract breach and job satisfaction of the employees in the company *Aura* founded in Nis (Serbia). This study has been conducted by the case study method which is generally suitable for examination the phenomena which have not previously been the subject of a comprehensive research and when it is necessary to determine the possible directions in further research (Evers & van Staa, 2010). These conditions were fulfilled in our research: the relationship between psychological breach and job satisfaction has not been examined on the territory of the Republic of Serbia and this research is the first phase of the more comprehensive one. Therefore, this method was the optimal solution for the research we conducted.

The result of the study showed that there is statistically significant negative relationship among these variables. The linear regression analysis showed that 23 percent of change in job satisfaction is due to the psychological contract breach. Furthermore, it was also found that psychological contract breach influences job satisfaction, so if psychological contract breach increases for 1 unit that will bring decrease in job satisfaction for 0.480 units. Since the results also showed that the employees in this company generally believe that the employer fulfilled their expectations (mean value of breaching the psychological contract is 1.90), managers of this company should continue to dedicate attention to the communication

with employees in order to help them create realistic expectations. Furthermore, the management should keep all of its promises that are made to the employees.

Based on the implemented method of the empirical research, there are some limitations of this study. First, because of the small sample, generalizations for the sector of cosmetics production or the whole private and public sector in Serbia can not be made. Second, the data has been collected via questionnaire with limited number of the items (especially when it comes to the job satisfaction), so it was not possible to determine which job related characteristics produce the lowest level of job satisfaction. That information would be useful for creating effective human resource management practices. In order to overcome these limitations, our future research will be based on a bigger sample and the questionnaire regarding the job satisfaction with more items will be used.

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## UTICAJ KRŠENJA PSIHOLOŠKOG UGOVORA NA ZADOVOLJSTVO POSLOM

*Psihološki ugovor predstavlja implicitne pretpostavke zaposlenog (ili poslodavca) u pogledu sadržaja njihove međusobne razmene, pored onih koje su specificirane u formalnom ugovoru o radu. U slučaju njegovog kršenja, može doći do mnogih negativnih posledica. Jedna od njih je niži nivo zadovoljstva poslom. U studiji koja je sprovedena pokušali smo da nađemo odgovor da li je kršenje psihološkog ugovora u nepovoljnim ekonomskim uslovima negativno uticalo na zadovoljstvo poslom, kao što je utvrđeno u većini studija sprovedenih u razvijenim zemljama. Metod istraživanja koji smo koristili bio je metod studije slučaja. Da bismo testirali hipotezu, koristili smo anova test i linearnu regresiju. Rezultati studije su pokazali da kršenje psihološkog ugovora negativno utiče na zadovoljstvo poslom zaposlenog uprkos nepovoljnim ekonomskim uslovima u kojima rade.*

Ključne reči: *psihološki ugovor, kršenje, zadovoljstvo poslom, zaposleni*



## **SOURCES OF WORKPLACE STRESS IN SERVICE SECTOR ORGANIZATIONS**

*UDC 005.32*

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**Abstract.** *Stress, as a dominant feature of the modern society, represents a serious problem for numerous organizations as it has significant effects on their business results. The aim of this paper is to examine and analyze the various sources of stress which employees in service sector organizations face. The key tendency of service sector organizations is to achieve efficiency, cost decrease, income growth, all of which impose high expectations and pressure upon employees. The sources of workplace stress in those organizations are observed from the perspective of job characteristics, organizational context and the employees' personality traits. A review of key stress factors from the above-mentioned perspectives enables a holistic approach to human resource managers, which could be of great importance for setting up a strategy and planned approach to managing workplace stress.*

**Key words:** *workplace stress, employees, job, services, organizational behavior*

**JEL Classification:** M12, M54

### INTRODUCTION

From the moment of birth, there are all sorts of expectations that each person faces: to take first steps, to learn to read and write, to do well at school and university, to find a well-paid job, to choose a life partner, to form a family, to have a successful career (Claridge & Cooper, 2014). All these expectations represent a potential source of pressure. From the perspective of persons capable of working, digital revolution and technological innovations have brought about a number of changes in work environment

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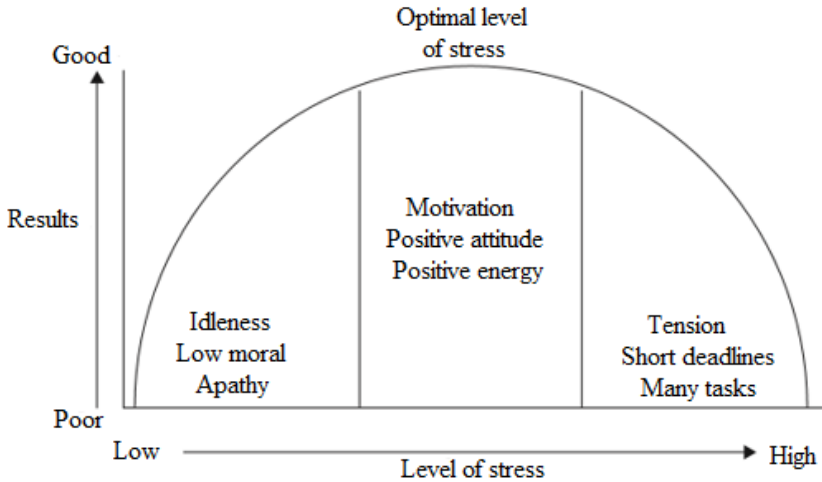
and working conditions. Apart from a lot of positive effects, there have also been various negative effects including higher complexity of jobs, unrealistic expectations from employees, longer working hours, less time for family and private life. Moreover, employees are facing the challenge of adapting and adjusting to new methods of doing business in addition to fulfilling ever-growing customer demands. All these factors and their combined effects lead to an increasing number of stressful situations at a workplace. Over the past several years, stress has been considered to be one of the most important problems in contemporary organizations operating in the conditions of strong competition (Cranwell-Ward & Abbey, 2005; Balkan & Serin, 2014).

The objective of this paper is to point to the most significant sources of workplace stress for employees of service sector organizations from three different perspectives - job characteristics, organizational context and the employees' personality traits. A review of key stress factors from the above-mentioned perspectives enables a holistic approach to workplace stress, which could be of high importance for setting up a strategy and planned approach to managing workplace stress, as it is considered that healthy and satisfied employees produce better work results (Cooper & Cartwright, 1994; Žarevac-Bošković, 2017).

## 1. DEFINITION OF WORKPLACE STRESS

The term *stress* in the context known nowadays was first used in 1936 when Hans Selye defined it as a "specific body response to every demand for change" (Nagarajan, 2017, p. 337). The National Institute for Occupational Safety and Health defines workplace stress as any harmful physical and emotional response of employees to increased job demands that are not in line with their knowledge and skills (NIOSH, 1999). In other words, stress is the response of the mind and body to a certain event and causes the feeling of doubt in one's own abilities to act with regard to the recent event (Lal & Singh, 2015; Kular, 2017). Lazarus and Folkman examined a relation between a person and the environment, and concluded that stress occurs when a person feels that the environment is too demanding for their capacities and capabilities (Lazarus & Folkman, 2004). To put it another way, stress occurs every time a person cannot handle the circumstances they are facing, or the circumstances that they can face and deal with have negative consequences on them (Glavan, Petrovan & Radu, 2016).

Workplace stress, occupational stress, organizational stress, stress on job are the expressions used to describe stress experienced by employed people. Even though workplace stress is only one of the numerous types of stress that a person is exposed to, it is considered to be among the most distinctive ones, because employees spend most of their time at work which represents the foundation of their existence and standard of living (Weinberg, Sutherland & Cooper 2010; Britt & Jex, 2015). Stress may have a positive impact on employees only up to the level that they perceive it as a motivational factor, or up to the level of their psychophysical tolerance (Stranks, 2005; Khuong & Yen, 2016). Above that level, stress becomes negative – not only for the employees, but for the entire organization, as indicated in Fig. 1 (Landy & Conte, 2013).



**Fig 1.** The impact of stress level on employees' performance

*Source: Adapted from Weinberg, Sutherland & Cooper, 2010, p. 79*

Workplace stress is experienced by all employees regardless of the profession and the position they hold (Valcik & Benavides, 2011; Claridge & Cooper, 2014). For example, policemen and employees at psychiatric departments are often exposed to violent people, nurses at oncology departments work with severely ill patients whose treatment outcome is uncertain, ambulance drivers and firemen often face situations including deceased or heavily wounded persons. Also, jobs that at first glance may not seem stressful may involve various forms of stress as there is no single organization that functions independently and free from interactions with the environment (Kompier & Kristensen, 2001). Furthermore, there are different forms and levels of stress. When employees are faced with tasks and work requirements that exceed their knowledge, skills and capabilities, the first symptoms of stress occur and cause a change in employees' behaviour in the following ways: loss of one's sense of humor, chronic fatigue, lack of concentration, frustration, difficulties in decision making, lack of motivation, lack of interest and keeping to oneself in relationship with colleagues and customers (Stranks, 2005). The next level of stress begins to affect the physical condition of an employee and may manifest as: lack of sleep, decreased or increased appetite, headache, tachycardia, sweating, coughing. Should stress-causing factors become stronger or remain unchanged for a longer period of time, employees may suffer from psychological disorders, cardiovascular or digestive diseases, immune system disorders and other diseases (Claridge & Cooper, 2014). Due to the above reasons, it is not surprising that the American Association of Psychologists ranked chronic stress among top six causes of death (Nagarajan, 2017), while the World Health Organization characterized stress as the health epidemic of the 21st century (Mequilibrium, 2013).

## 2. KEY SOURCES OF WORKPLACE STRESS IN SERVICE SECTOR ORGANIZATIONS

Until a few decades ago, service sector was very attractive for candidates looking for a job. There was a general opinion that the organizations within this sector provide more agreeable work conditions, higher salaries, lower stress level, greater possibilities to acquire knowledge and skills, and significantly better conditions and possibilities for women when compared to production sector organizations (Bosch & Wagner, 2010). Today, the opinion about service sector organizations is significantly different – many jobs in service-related areas are low-paid and do not provide the opportunities for promotion, while working with customers is considered increasingly demanding and difficult. The globalization of business operations and fierce competition have resulted in higher standards and customer expectations. Some authors pointed out that for service sector organizations, “customers are as important as the air we breathe” and that organizations that have loyal customers may feel certain about expecting revenues, higher market share and profitability growth in future (Viardot, 2017). The overall result of any organization within the service sector depends on the manner of providing service and the quality of the provided service which puts additional pressure on employees (Inghilleri & Solomon, 2010). Furthermore, those organizations are more likely to undertake initiatives for development of new products and services in order to meet all market demands and to improve all segments of relationships with stakeholders (Rađenović & Krstić, 2017). Key demands placed before employees in service sector organizations include (Fottler, Ford & Heaton, 2010):

- Identifying customers’ needs, desires and expectations;
- Providing all requested information to customers;
- Treating customer as a guest and providing all pertaining services;
- Monitoring and increasing customer satisfaction level;
- Eliminating and decreasing customers’ negative experiences;
- Attracting and keeping customers;
- Building long-term relationships with customers.

Moreover, employees are expected to quickly master every new technology, fulfill the set objectives, attend business meetings, learn new procedures, rules and regulations and be aware of any change in the legal regulations (Stranks, 2005; Kular, 2017). All these demands put certain pressure on employees that may lead to stress.

Based on the available literature, several different classifications and sources of stress can be noticed. There are three key perspectives based on which the stress-causing factors at a workplace will be considered in this paper: job characteristics, organizational context and employees’ personality traits (Table 1). Observing the sources of workplace stress from those three perspectives is important because it provides a holistic approach to the sources of workplace stress, thus enabling human resource managers to review the key sources of employees’ workplace stress, and to find a best way to eliminate or reduce them (Grawitch, Ballard & Erb, 2015).



**Table 1** The overview of the key sources of workplace stress from different perspectives

Job characteristics	
S	Job content and nature
o	Scope of job tasks and activities
u	Employees' autonomy when performing job tasks and activities
r	Continuous setting up of new goals
c	Too demanding customers
e	Job insecurity
s	Working hours
	Working conditions
Organizational context	
f	Organizational structure and culture
	Mutual relations in an organization
s	Employees' roles in an organization
t	Career development
r	Leadership style
Employees' personality traits	
e	Psychological characteristics of employees
s	Age and work experience
	Gender structure

*Source: Authors, based on the literature*

### 3. JOB CHARACTERISTICS AS A SOURCE OF WORKPLACE STRESS

Key job characteristics that may be the sources of stress include: job content and nature, the scope of job tasks and activities, the autonomy of employees, continuous setting up of new goals, too demanding customers, job insecurity, working hours and working conditions.

**Job content and nature** may be the sources of stress regardless of whether the job is a routine-based and monotonous, or a more complex and difficult one. In recent years, in organizations that base their working processes and activities mostly on information and communication technologies, employees often notice some symptoms of stress. Communication conducted via email, without physical presence, does not enable hearing the other party's voice tone and assessing the elements of non-verbal communication and gesticulation, which may lead to alienation among employees and, consequently, to stress. Researches show that employees who work remotely in various virtual project teams with time become concerned that they are less respected and appreciated i.e. that they are "out of sight, out of mind" (McCloskey & Igarria, 2003, p. 19). Furthermore, employees often become frustrated due to the inability to collect and process a large amount of data and information that result from the intensive use of information technologies. As a consequence of the large amount of information that employees face, various health issues may occur, including insomnia, lack of sleep, poor concentration, headache and stress (Lazarević & Lukić, 2016). Position that employees have in organization can also be the source of stress. It is considered that employees who work on managerial positions experience higher level of stress compared to those who do not hold managerial positions (Weinberg, Sutherland & Cooper, 2010).

**Scope of job tasks and activities.** In organizations that feature an insufficient number of employees for the scope of work that needs to be performed, employees become overburdened and consequently stress occurs. Employees may be also overburdened with work in cases of other colleagues' sick-leaves or absence, as they need to take over their responsibilities and activities in addition to their own. Predefined project realization deadlines represent one of the sources of stress for employees who perform a lot of tasks and have short deadlines for their realization (Cranwell-Ward & Abbey, 2005). Multitasking (a simultaneous performance of a large number of activities) also represents a source of stress for employees who are expected to perform several tasks simultaneously within a short period of time (Toister, 2013).

**Employees' autonomy** when performing job tasks and activities. The degree of independence and the personalization of the job mean greater freedom for employees to make decisions regarding the manner of conducting their job tasks and activities (Nagarajan, 2017). When employees have no impact on their work, i.e. no control over job tasks and activities and do not take part in the decision-making process, frustration and stress may occur in job performance as they are expected to fulfill the goals while they cannot impact the jobs and activities they are performing.

**Continuous setting up of new goals.** The goals set before employees are becoming increasingly ambitious, whereas the deadlines for their realization are getting shorter. As a consequence, this puts certain pressure on employees and leads to stress. Even if employees are aware that they will be rewarded if they achieve set goals, the pressure that they feel may jeopardize their health.

**Too demanding customers.** A specific source of stress, especially for employees in the service sector organizations, comes from customers who are too demanding. Employees in service sector organizations do their best to meet all the demands and requests of their customers, which is why any inconvenience that they experience may lead to stressful situations (Toister, 2013). Working with demanding customers becomes even more stressful in situations when employees do not have the support of their superiors and managers.

**Job insecurity.** Employees have become burdened with fear that they may not keep their position and that their labour agreement may not be extended after the agreed period expires. Over the past few years, there has been an increase in the number of employers who offer labour contracts for a definite period of time, part-time jobs or hire staff for temporary projects (Eurofound, 2012), which leads to stress for employees due to constant uncertainty about the job and future living. In addition, due to the automatization of a number of job tasks and activities, employees started fearing that they might lose their jobs. A research conducted by the McKinsey Institute shows that due to the effects of the automatization by 2030 between 400 and 800 million people will be replaced by cutting-edge technology and robots, whereas between 75 and 375 million of employees will have to acquire new knowledge and skills in order to be able to perform job tasks and activities (Manyika et al., 2017). Other researches have also shown that the chronic fear of keeping a job is a stronger stressor for health deterioration than smoking or high blood pressure, as well as that living with the constant fear of job loss is worse than unemployment (Nagarajan, 2017).

**Working hours.** Overloading employees with job tasks and activities results in longer working hours. Eight hours' working time has become a "dead letter" on the contract and

job description. Employees spend a lot more time at work or doing activities related to working at home (e.g. responding to electronic mail out of working hours or during the weekend). Overtime work may lead to the imbalance between job and employees' private lives (Golubović & Golubović, 2015). Work in shifts is also considered a source of stress. The results of numerous research studies showed that employees who work in alternative shifts are exposed to higher level of stress compared to those who work only one shift, as well as that the employees who work night shifts for many years are more exposed to stress than their colleagues who work daily shifts (Kular, 2017).

**Working conditions.** If business premises lack appropriate heating, light and ventilation, employees cannot give their maximum at work and may experience stress. If the tools and resources used for work are not organized appropriately and available to employees, they will get tired easily. Furthermore, it is very important that a workplace provides adequate sanitary conditions, privacy, protection and safety, but also that it is possible to purchase food and refreshments nearby.

**Frequent travelling** may also present one of the sources of stress for employees. Although business trips are most often considered as a privilege, employees still need to finish their office work, and they spend time separated from their families. Also, airplane flights are often organized so that it is necessary to be at the airport either early in the morning or late at night which may lead to disrupted sleep and daily routine.

#### 4. ORGANIZATIONAL CONTEXT AS A SOURCE OF WORKPLACE STRESS

The key characteristics of the organizational context that may cause stress include: organizational structure and culture, mutual relations in an organization, employees' roles in an organization, career development, leadership style.

**Organizational structure and culture.** In a bureaucratic organizational structure, the dominant value systems and rigorous codes of conduct may lead to an incongruence between organizational and individual standpoints, norms, values and beliefs which most often represents the cause of conflicts and stressful situations at work. Waiting for a large number of approvals in order to complete an activity may lead to frustration and stress for employees. On the other hand, an adaptive organizational structure characterized by flexibility, agility, fewer hierarchy levels, decentralized decision-making process may also result in a high degree of uncertainty and stress for employees (Petković & Lukić, 2014). In times of organizational changes (reorganization, restructuring, redesign), employees take part in them and change their cognitive and behavioural spheres of personality by changing knowledge, standpoints, values, norms, rituals and conduct (Wright, 2015). They may witness layoffs, relocations and decreases in the number of employees which may lead to unpleasant feelings and stress.

**Mutual relations in the organization.** Employees spend most of the time working in different teams composed of members with different personality traits, beliefs, values standpoints, behavioural norms. Should employees not fit into the team, different types of conflicts and stress may occur. There are numerous factors related to mutual relations among employees in an organization that may lead to stress. This particularly refers to: unconstructive criticism, hostility and animosity, racism, discrimination, inadequate information and lack of communication, burying and not resolving conflicts, insufficient

transparency in the organization, different forms and types of physical and psychological violence and harassment (Stranks, 2005; Choudhary, 2013). A source of stress may also be workplace mobbing, as a form of psychological harassment, belittling, harming one's reputation, honor, human dignity and personal integrity at work. Workplace mobbing may take form of inadequate behaviour and unacceptable verbal communication, gestures or written communication. Some of its types/forms include not allowing an employee to express their opinion, ungrounded and constant criticizing and disparaging of the work results of an employee, interrupting an employee while talking, louder tone of voice in communication with employees, ignoring, making fun of, gossiping about, spreading false information and slandering an employee, excluding an employee from the social life of the organization, etc. (Law, no. 36/2010; Rulebook no. 62/2010). Exposure to such forms of workplace mobbing is correlated with tiredness, exhaustion, tensions, anxiety, depression, apathy, insecurity, insomnia, and often psychosomatic symptoms (migraine, gastritis, ulcer, arrhythmia, hypertension, etc.) (Petrović, Čizmić & Vukelić, 2014).

**Employees' roles in an organization.** Each employee in an organization has at least one role, but may also have more than one role at the same time. Stress may be the result of indistinct roles or the consequence of the fact that employees are allocated multiple roles they must perform in a short period of time, as well as insufficiently clear assignment of responsibilities. Moreover, stress may occur if an employee's roles in an organization are changed too frequently, and they do not understand what is expected from them and how to fulfill those expectations (McCormack, 2014).

**Career development.** Relocation to other positions, promotion to higher positions in an organizational structure and relocation to lower positions are the processes of organizational mobility that provide employees with opportunities to gain work experience and directly impact their career development. Promotion, even though it represents a motive for more challenging work and higher salary, sometimes may be a source of stress for employees if they believe that they do not possess sufficient knowledge or expertise to perform new job which requires higher responsibility, and/or if they lack confidence. Also, stress may be experienced by employees who got new responsibilities and competences, but no salary increase, as well as by those who expected a promotion but for some reason were not promoted. Relocations to lower positions are experienced as completely degrading and this may be another source of workplace stress.

**Leadership style.** Leadership style as a combination of various aspects of a leader's behaviour toward their followers represents an important factor that determines the functioning of an organization and their employees (Stojanović-Aleksić, Stamenković & Milanović, 2016). A generally accepted statement that "employees don't leave companies, they leave managers" shows the importance leadership style holds for employees – their satisfaction, morale and stress level (Cranwell-Ward & Abbey, 2005). In cases of autocratic leadership style where employees are not allowed to participate in the decision making process, express their opinions and suggestions, the result is a negative and unproductive atmosphere. Furthermore, if an employee does not receive the needed support and assistance from their superior in performing their daily tasks and activities, the feeling of dissatisfaction and stress will come with time.

## 5. EMPLOYEES' PERSONALITY TRAITS AS A SOURCE OF WORKPLACE STRESS

The key personality traits of employees that may cause stress include: the psychological characteristics of employees, their age, working experience, and gender structure.

**The psychological characteristics of employees.** The analysis of employees' personality structure in service sector organizations indicates that specific personality traits, i.e. psychological dispositions have significant effects on the occurrence and experience of a stressful situation. This primarily refers to the degree of resistance to frustrating situations and the level of emotional stability and self-control in terms of behaviour, persistence, decisiveness, responsibility, high level of self-confidence and temperament type. Every person is unique and their reactions to stress depend on their psychological personality traits (Cranwell-Ward & Abbey, 2005). A person who in circumstances of a simple frustrating situation feels an increased degree of emotional excitement, has inadequate reactions and loses self-control is bound to experience such a situation as stressful. On the other hand, a person who is emotionally stable i.e. whose temperament traits enable them to keep the same situation under control and remain calm, shall not feel that such a situation is stressful. Experiencing stress causes numerous physiological and psychological reactions that have negative effects on the motivation a person needs to fulfill goals. Just as any activity requires "optimal" motivation, accompanied by psychophysiological and other dynamic processes in the organism, every surpassing of that optimal level is most often the source of stress that reflects on: the decrease and narrowing of cognitive abilities especially when it is required to make fast and right decisions that are part of any service-related activity. In addition, conscientious and responsible employees often disrupt the balance between work and private life by taking their job home and working from home. It is a frequent case that employees, even though they are at home, feel burdened by thinking about work and therefore cannot be fully dedicated to their family and friends and cannot take part in daily activities. It is a common opinion that without an adequate balance between work and private life, employees will not be able to fully dedicate themselves either to work or to private life, which leads to weaker performance in all areas. Besides, mutual relations in an organization are also affected by the level of the emotional intelligence of employees – if employees, particularly managers, do not possess developed emotional intelligence, that may lead to numerous conflict situations and stress for all employees (Radosavljević & Đorđević, 2016).

Over the last few decades, special attention has been given to the "burnout syndrome" of employees at work as a response to long-term chronic stress due to the following three dimensions – emotional exhaustion, the loss of the feeling of personal identity (depersonalization) and the loss of the feeling of personal achievement at work (Maslach & Jackson, 1981; Maslach, Schaufeli & Leiter 2001).

**Age and work experience of employees.** Generally, young people who do not have work experience are exposed to a higher level of stress than those who have accumulated experience and have already built stress-fighting mechanisms (Robbins & Judge, 2017). Over the past few years, it has been noticed that young people increasingly often sign specific contracts with their first employers that contain clauses on trial work, work for a definite period of time, part-time work, or temporary engagement for the needs of concrete projects (Eichhorst et al., 2014), which causes stress due to job uncertainty.

**Gender structure of employees.** Women experience higher level of stress compared to men due to their role at home and in family life. They are expected to be competitive at work in terms of achieving goals, whereas at home they perform traditional roles related to nurturing family values. In addition, unequal salary levels, the evaluation of achieved performances and the manner of rewarding men and women for performing the same jobs causes increased stress levels for women (Nagarajan, 2017).

## 6. IMPLICATIONS OF WORKPLACE STRESS ON HUMAN RESOURCE MANAGEMENT

Regardless of occupation, hierarchical position in organization, industry in which organization operates and its environment, it is even impossible to imagine a job that is not stressful. Workplace stress has negative implications not only on employees, but on the entire organization. With the main purpose to minimize or eliminate negative effects and consequences of stress on employees, human resource managers may take various activities through:

- **Job analysis and job description.** Based on the job description, by determining the nature and content of a job and identifying specific working conditions, it is possible to determine potential sources of stress with the aim of permanently working on providing conditions for achieving a “healthy” workplace from the organizational and psychological aspect. Stress tolerance, as a measure which shows how effectively employees deal with high workplace stress, should be calculated for each occupation and examined in the process of job analysis.
- **Recruitment and selection process.** In many job advertisements it is stated that the ideal candidates for job are those who are able to “deal with stress”, “work in stressful environment”, “manage stressful situation”. In that way, employers put it clear to potential candidates that job sometimes may be stressful. Furthermore, by using appropriate predictors (personality tests) in the selection process, human resource managers intend to choose such candidates whose psychological personality profiles and high stress tolerance will fully comply with the job requirements.
- **Employees performance evaluation.** Stress has negative impact on productivity and overall performance of employees, and consequently organizations. In the process of performance evaluation, the results of employees which are under stress may be significantly lower comparing to results of employees which are not under stress. For that reason, human resource managers should identify the causes of poorly performance of employees, encourage and motivate employees during feedback interviews to cope with stress and point out to the various methods and techniques which can be valuable when dealing with stressful situations.
- **Establishment of stress management programs.** In many organizations, human resource managers started to implement different stress management methods and techniques with the aim of eliminating or reducing the sources of workplace stress and their intensity. One of the most popular approaches to stress management is the establishment of workplace wellness – programs for helping employees to stop smoking, manage their diabetes, weight, healthy lunch, and various programs which include physical activity of employees (gym, tai chi, fitness, yoga, meditation and relaxing).

- **Establishment a culture of zero-tolerance to bullying and mobbing.** Human resource managers should establish a culture of mutual respect and trust in the workplace in which all employees feel safe and comfortable. All bullying and mobbing activities in organization should be prevented and punished.
- **Departure of employees from organization.** When conducting exit interviews with employees who leave the organization, human resource managers should identify the main reasons for their leaving. If employees state that one of the reasons is workplace stress, organizations should implement set of methods, techniques and activities with the aim of preventing or minimizing stress.

All of the above-mentioned activities of human resource managers are very important when dealing with workplace stress, especially having in mind that increasing number of employees feel that they are under stress (Holton, Barry & Chaney, 2016), and all negative consequences that stress has on employees and organizations.

### CONCLUSION

This paper presented the key sources of workplace stress in service sector organizations from the perspective of job characteristics, organizational context and the psychological characteristics of employees. The key tendency of service sector organizations is to achieve efficiency, cost decrease, income growth, all of which impose high expectations and pressure upon employees. It is inevitable that greater requirements at work and the growing pressure to achieve better results will be an integral part of life and work in the future. The holistic analysis of sources of workplace stress which is conducted in this paper may be useful to people who are dealing with stress management, and particularly to human resources managers whose daily activities involve facing various negative consequences of employee stress, all with the aim of anticipating stress factors and attempting to manage as effectively as possible this increasingly present negative social phenomenon. Dealing with workplace stress will become *conditio sine qua non* for healthy and balanced life, but also for achieving positive business results.

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## IZVORI STRESA KOD ZAPOSLENIH U ORGANIZACIJAMA IZ USLUŽNOG SEKTORA

*Stres, kao dominantna karakteristika savremenog društva, predstavlja ozbiljan problem mnogih organizacija, s obzirom na činjenicu da ima značajan uticaj na rezultate njihovog poslovanja. Cilj ovog rada je da ukaže na izvore stresa sa kojima se suočavaju zaposleni u organizacijama iz uslužnog sektora. Organizacije iz uslužnog sektora nastoje da povećaju efikasnost, smanje troškove, povećaju prihode, što pred zaposlene nameće velika očekivanja i određenu dozu pritiska. Ključni izvori stresa koji postoje u ovim organizacijama su prikazani iz perspektive karakteristika posla, organizacionog konteksta i karakteristika ličnosti zaposlenih. Pregled ključnih izvora stresa iz gore navedenih perspektiva omogućava menadžerima ljudskih resursa holistički pristup problemu stresa, što je od velikog značaja prilikom koncipiranja metoda i tehnika za upravljanje stresom na radnom mestu.*

*Ključne reči: stres na radnom mestu, zaposleni, posao, usluge, organizaciono ponašanje*



## **SALES LEADERSHIP AND SALESPEOPLE'S PERFORMANCE IN KOGI STATE: AN INVESTIGATION OF HERBAL MIXTURE MARKETING MANAGERS**

*UDC 005.3:658.8(662.2)*

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**Abstract.** *This study focused on leadership styles and job performance of salespeople of Herbal Mixture Marketing Organizations in Kogi State, Nigeria. The population of this study is not definite, and as such Bill Godden method was used to determine the sample size of 384. For the field survey, the instrument used was structured questionnaire. The study analyzed data with descriptive statistics, T-test, correlation and multiple regressions. Finding indicates that there are significant differences between transformational and transactional sales leaders of Herbal Mixture Marketing Organizations in Kogi State, Nigeria. Finding further shows that welfare concern and carrot & stick system has significantly positive effect on salespeople's performance, where the effect of team spirit building is negative. The study concludes that the differences between transformational and transactional sales leadership are evident, and the practice of these leadership approaches may vary from country to country, region to region and culture to culture. This study therefore recommends that Herbal Mixture marketing managers should adopt more of transformational sales leadership, and focus more on welfares and carrot & stick system strategically to enhance desired salespeople's performance.*

**Key words:** *Transformational sales leadership, Transactional sales leadership, Welfares, Carrot & stick system, Team spirit building*

**JEL Classification:** L20, M10

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## I. INTRODUCTION

Recently, the issue of leadership has raised more research attention. Leadership is observed as the main subject of concern in marketing as it has very strong connection with superior job performance and success of salespeople. Leadership stimulates a bond which makes people work together (Bushra et al., 2011) in one direction with team spirit, following the corporate roadmap for the achievement of superior salespeople's performance and success. A number of research reports have identified imperative leadership style that can influence performance. Researches (Bass & Riggio, 2006; Chully & Sandhya, 2012; Rahman et al., 2014; Mottoh, 2015; Ho et al., 2016; Fernandes & Awamleh, n.d.) focused on transformational and transactional leadership styles as being critical to job performance. The study conducted by Walumbwa, Avolio, and Zhu (2008) reported that transformational leadership is one of the most popular aspects in understanding follower's attitudes, behavior and performance. Transformational leadership concentrates on individual and team level job performance which lead the organization towards success (Judge & Piccolo, 2004).

The position of researchers appears to be contrary when the sales leadership style adopted by Herbal Mixture Marketers is taken into consideration in Kogi State. Although personal selling and sales leadership are particularly important in business-to-business marketing (Bingham & Gomes, 2001; Minett, 2002; Dwyer & Tanner, 2002), it is also relevant in other marketing areas. It appears that though transformational sales leadership approach is adopted by some marketers; transactional sales leadership approach is more eminent among marketers of Herbal Mixture in Kogi State, Nigeria. The Nigerian economic factor appears to have supported this leadership style; salespeople are aware of the carrot-and-stick reward system, and are forced to pursue corporate goals based on the known consequence of crashing out of their jobs. Rahman et al. (2014) stressed that transactional leadership approach apparently promotes a performance oriented work culture by rewarding performance and weeding out incompetents. Sequel to this, job performance has maintained a status quo. Contrarily et al., (2000) argued that transactional leadership style generates lower performance than transformational leadership style. It is however certain that both leadership approaches and styles are critical to job performance of salespeople depending on the agility of the marketing manager in question.

This study is focused on the sales leadership and salespeople's performance of Herbal Mixture in Kogi State. The study does not consider the impact of the four dimensions of transformational leadership suggested by Bass (Yammarino & Dubinsky, 1994) which are charisma, inspiration, intellectual stimulation and individualized consideration (Wilkinson, 2007), and the dimension of transactional leadership are not taken into consideration. Unlike Wilkinson (2007) who decided not to consider reasons for poor salesperson performance because other researchers (such as DeCarlo et al., 1997; Dubinsky, 1999; Huffman & Cain, 2000) have already reported on those reasons.

### 1.1. Statement of the problem

For long, there has been a problem of identifying more effective sales leadership approach in the field of marketing in Kogi State, Nigeria. Effort to identifying and distinguishing transformational and transactional sales leadership styles is not intensive enough, particularly when considering factors such as team spirit building, welfare

concern, carrot & stick system and performance. Yet, leadership researches (Awamleh & Gardner, 1999; Bass, 1985; Conger & Kanungo, 1987; House, 1977) have been conducted based on the observed behaviour among managers in various organizations in the developed countries. Basically, salespeople's performance is linked up with the kind of leadership approaches adopted by marketing managers of Herbal Mixture in Kogi State, Nigeria. It appears that some marketing managers who demonstrate transformational sales leadership approach produce peculiar results which distinguished them from those that adopt transactional sales leadership approach. The marketing managers with transformational sales leadership approach seem to be more salespeople-oriented, and this induces relationship between individual salesperson's team spirit, job performance and organizational success. Tarricone & Luca (2002) opined that unsuccessful teamwork is as a result of the disappearance of team spirit. Ingram (2000) expressed that teamwork may be viewed as a strategy with wide focus on improved performance of individuals and organizations. In addition, marketing managers with transactional leadership approach have more concern for tasks (and not salespeople's welfares), which is believed to be connected with improved performance of individual salesperson and the Herbal Mixture companies at large. It therefore becomes an objective of researches to investigate the disparity among leaders considering these factors, and equally which approach tends to produce more outcomes for Herbal Mixture Marketing Organizations in Kogi State, Nigeria. This study intends to fill the gaps as discussed.

### **1.2. Objective of the study**

This study seeks to investigate differences between transformational and transactional sales leadership, considering factors such as team spirit building, welfare concern, carrot & stick system and performance, as they are believed to cause disparity among marketing managers of Herbal Mixture in Kogi State, Nigeria.

## **2. REVIEW OF RELEVANT LITERATURE**

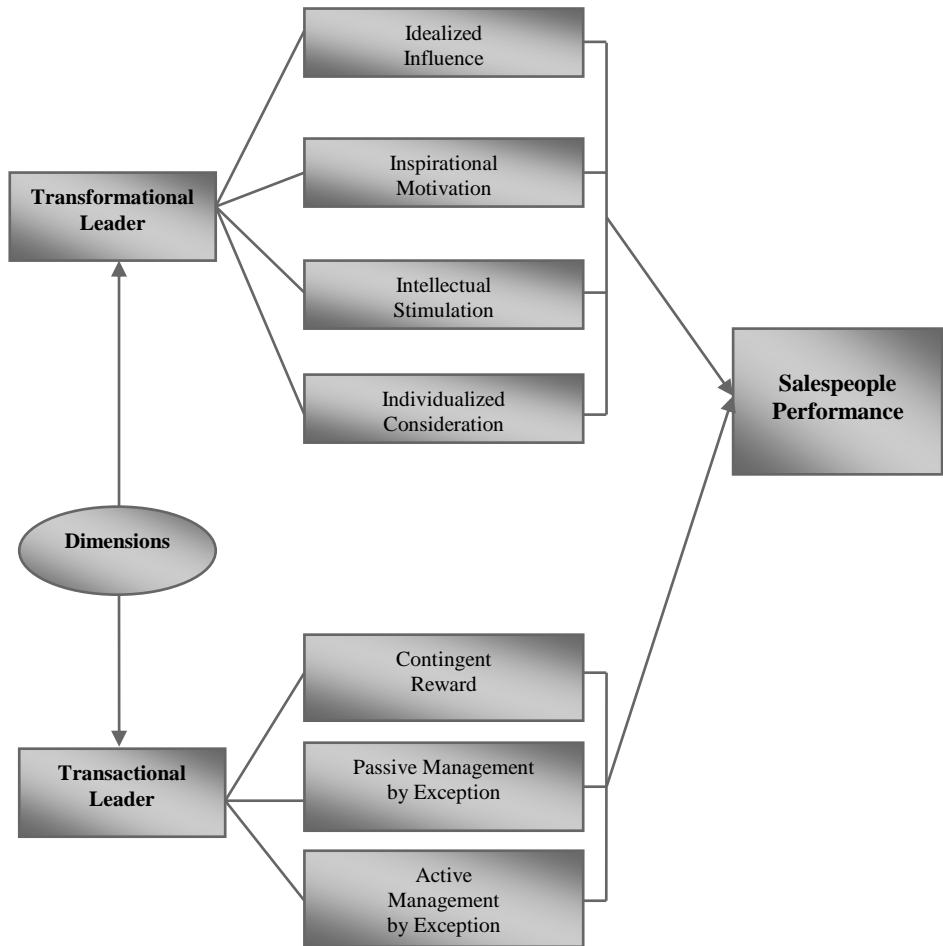
Salespeople are strategically significant to every organization's life cycle. Organizations have a starting point and nobody is expected to know its end, but unfortunately the success of the organization may be truncated through competition in the marketing environment; this may in no doubt bring the life of the organization to an end. The activities of salespersons are critical to the lifecycle of the organization as revenue generators. Still, the salespersons have several other key duties. Ingram et al. (2005) asserted that sales leaders are critical to the success in salespeople's selling. Specifically, as there are various activities in the selling process, some requiring very different selling skills, it seems likely that different sales leadership activities may be necessary at different stages of the selling process (Wilkinson, 2007). Salespeople possess a range of attitudes that can be spurred by organizational lifestyle and culture. Extant studies have established that most of the variance in a salesperson's attitude and behavior can be explained by controllable organizational actions such as closeness of sales/marketing managers, clarity of goals, training and feedback (Evans et al., 2007; Rigopoulou et al., 2012). Essential display of organizational actions is believed to be affected by the kind of leadership style (transformational and transactional) adopted. Salespeople exhibit negative attitudinal and behavioural pattern to favourable organizational

actions, *ceteris paribus*. Most of the theories of leadership styles in organizations and salespeople's attitudes and behaviors in response to the leadership style have been primarily developed and tested in the U.S. and other developed countries (Gelfand et al., 2007).

According to Harris & Ogbonna (2001), "researchers have alluded to the importance of top management knowledge, skills and commitment in marketing and this lacuna in marketing theory are despite numerous indirect references to the importance of leaders in developing a market oriented culture". The reason for the need for more researches in sales leadership is that its style simply affects the pattern of providing direction, implementing plans, and motivating salespeople. Still, there seems to be controversy over classified leadership styles for several decades as proven by colossal researches previously. Each of the leadership style has a peculiar potential which is driven by the zeal to achieve corporate marketing objectives. Ghanbari & Eskandari (n.d) noted that organizations today, for improvement of efficiency, effectiveness, and productivity require using new methods of leadership. Transformational leadership and transactional leadership are the classes of leadership styles which are probably adopted to enhance efficiency and effectiveness in the marketing environment. In his view, Northouse (2010) asserted that transformational leadership is currently one of the most popular approaches to leadership. Meanwhile, transactional leadership prioritizes result above all other events, which makes business as usual follow the same direction in goal path. Although "different theoretical approaches focus on leadership but most renowned framework is transformational and transactional leadership" (Hambley et al., 2007). Nevertheless, the choice of whatever leadership style that fits any marketing organization most depends largely on the marketing orientation, culture and goals. To promise the success of a marketing organization, it is important to adopt the appropriate leadership style (Paracha et al., 2012).

This study believes that transformational sales leadership's focus is on identifying needed change, creating a vision to guide the change via motivation, and executing the change in tandem with committed salespeople. These would have been appreciable phases in transformational sales leadership, but Bass and Avolio (1994) had suggested that transformational leadership has four dimensions called "the Four I's" as shown in Figure 1. The brief enlightenment from Bass & Avolio *ibid* is as follows:

- i. **Idealized influence**, which described a behaviour of leaders that makes followers admire, respect and believe in it as well.
- ii. **Inspirational motivation**: In this dimension, transformational leaders are described as leaders who are able to articulate clear expectations of achievement of followers, showing the commitment to the whole purpose of the organization, and are able to inspire the team spirit within the organization through optimism.
- iii. **Intellectual stimulation**: Transformational leader must be able to foster new ideas, provide creative solutions to problems faced by the followers, and provide motivation to followers for seeking new approaches in performing organizational tasks.
- iv. **Individualized consideration**: In this dimension, leaders described as transformational leaders listen attentively to the opinion of followers and specifically pay attention to the followers' career development.



**Fig 1** Dimensions of sales leadership

*Source: Gathered from Bass and Avolio (1994)*

In addition, Bass and Avolio *ibid* also defined the dimensions of transactional leadership as follows:

- i. **Contingent reward**, the process of setting standards and rewarding salespeople for their acceptable performance
- ii. **Passive management by exception**, where a marketing manager encourages initiative of salespeople and workflow without interference unless an issue arises
- iii. **Active management by exception**, in which marketing managers are proactive, anticipate problems, monitor progress and issue corrective measures

Many current leadership theorists agree that principals of transactional and transformational leadership can be combined for ideal outcomes for both management and the workforce (Spahr, 2016).

### 3. RESEARCH METHODS

This study used survey research design. Multiple-method was adopted, and this enables the survey to gather data from multiple units within the universe. The study measures two types of sales leadership styles and the performance of salespeople in terms of sales volume. A well-structured questionnaire was used for gathering primary data.

The population of this study includes salespeople of herbal mixture products found in metropolises of Kogi State. Yet, it was difficult to ascertain the population size of the salespeople in the study area. In view of this, Godden (2004)' method was used to determine a reasonable sample size. The initial concern of Godden *ibid* is that most often population size of the study area is unknown and he advocated "sample size - infinite population" (where the population is probably greater than 50,000). The formula is thus:

$$SS = \frac{Z^2 \times p \times (1-p)}{C^2}$$

SS = Sample Size

Z = Z-value (1.96 for a 95 percent confidence level)

P = Percentage of population (1/5 = 20 percent)

C = Confidence interval (.04 = +/- 4 percentage points)

A Z-value (as could be found in Cumulative Normal Probability table), and it shows the probability that a sample will be within a particular distribution.

$$SS = \frac{3.8416 \times 0.2 \times 0.8}{0.0016} = 384$$

For this study, 384 sample size was used. Two criteria were adopted (inclusion and exclusion criteria). For inclusion criteria, salespeople that are regular at the sales territory are selected. As for the exclusion criteria, the following were excluded from the study:

1. Salespersons who were absent for unknown reason during the time of the research
2. Salespersons who were contract staff
3. Salespersons that were less than 4 months in the service

In this study, descriptive statistics, correlation and multiple regression models were used for the purpose of analysis. The model is specified as follows:

$$Y_1 = B_0 + B_1X_1 + B_2X_2 + \mu \dots\dots\dots (i)$$

Where  $Y_1$  = Sales performance

$X_1$  = Team spirit

$X_2$  = Welfare concern

$X_3$  = Carrot & stick system

$B_0$  = intercept

$B_1$  to  $B_8$  = coefficient to be estimated and

$X_1$  to  $X_2$  are the independent variables.

#### ***A priori Expectation of the Study***

The a priori expectation of this study is that team spirit building, welfare concern and carrot & stick system are factors that will affect salespeople's performance positively. These factors are observed to be having potential differences in their power of influence.



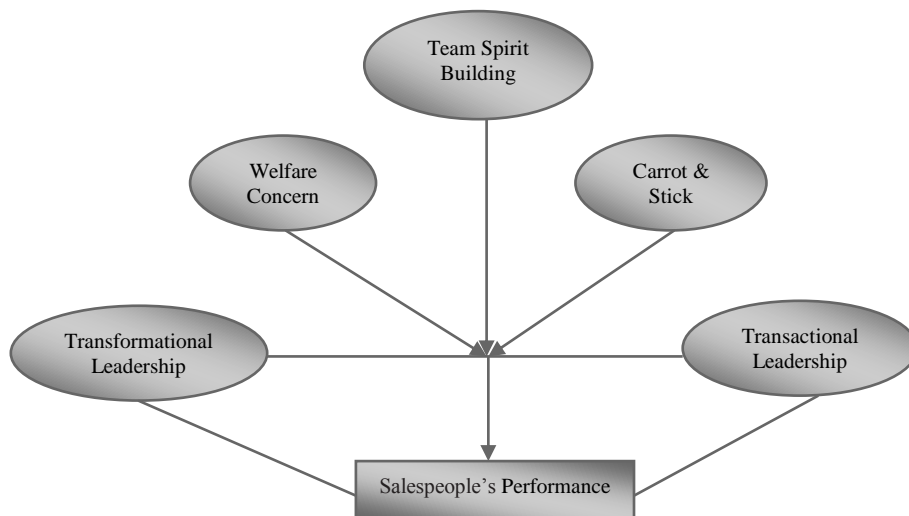
It is expected that the factors will distinguish between transformational sales leadership and transactional sales leadership of herbal mixture marketing organization in the metropolises of Kogi State.

**Table 1** Definition of factors

S/N	Factors	Author	Definition
1	Team	Cohen & Bailey (1999)	A sales team is a collection of individuals who are interdependent in the tasks and who share responsibility for the outcomes.
2	Welfare	Greve (2008)	Welfare consists of both material and immaterial needs of salespeople.
3	Carrot & Stick System	Akçay & Kanat (2017)	Carrot & Stick System is an approach that can force desirable behavior of salespeople.

*Source: Gathered from literature*

On the general note, it is expected that team spirit facilitate increased outcome or performance. Team spirit among salespeople remains a stimulant to teamwork and improved performance. Still, teamwork and performance are likely to be unrealistic without individual's readiness to share fundamental sales knowledge, skills and abilities in the team. In a study, Tarricone & Luca (2002) discovered that one team was highly successful while another team experienced dysfunctionality due to severe problems. This study views leadership ideology and practices as a pointer of rigidity and non-rigidity of marketing managers in marketing organizations.



**Fig 2** The a priori expectation

*Source: Authors*

Salesperson's welfare appears to be what concerns or bothers around the well-being of salespeople. In the understanding of Deacon (1992), welfare also encapsulates altruism, pursuit of self-interest, transition to work and moral regeneration. Welfare spans from the

concept of economic rationality of salespeople as human beings. In a probe into money as Nigerians' most considerable economic factor, the study of Greve (2008) queried the rationality behind using income and utility as a derivative for welfare. The main fact is that salesperson's welfare is associated with satisfaction (when found abundant) and dissatisfaction (when not found abundant), and these affect performance. Thus, salesperson's welfare is expected to influence sales performance.

Carrot & stick system is a buffering word for assuring reward for the reinstatement of acceptable work behaviour and punishment for discouraging unacceptable work behaviour. The carrot is assumed to be a product of the rationality of the economic man. The term is credited to John Locke who views the probability of establishing and utilizing motivation power of reward and punishment. Akçay & Kanat (2017) noted that this approach propels the motivation of desirable behaviors and makes salespeople attractive with rewards. As such, carrot & stick system is expected to be instrumental to improved performance.

#### 4. DEMOGRAPHIC DATA PRESENTATION AND ANALYSIS

This section deals with the analysis of the demographic data obtained from the survey. The results of the analysis are presented in the following tables and qualitatively interpreted.

**Table 2** Showing demographic characteristics of the respondents

Responses	Frequency	Percentage	Mean/Mode
<b>Age</b>			
15-25	139	40.4	34.77
26-36	47	13.7	
37-47	79	23.0	
48-58	59	17.2	
59 & above	20	5.8	
<b>Total</b>	<b>344</b>	<b>100.0</b>	
<b>Gender</b>			
Male	232	67.4	232
Female	112	32.6	
<b>Total</b>	<b>344</b>	<b>100.0</b>	
<b>Marital status</b>			
Single	125	36.3	132
Married	132	38.4	
Divorcee	72	20.9	
Widow(er)	15	4.4	
<b>Total</b>	<b>344</b>	<b>100.0</b>	
<b>Educational background</b>			
PSLC	64	18.6	184
SSCE	184	53.5	
Higher institution	96	27.9	
<b>Total</b>	<b>344</b>	<b>100.0</b>	

*Source: Field Survey, 2016*

Table 2 shows the demographic characteristics of respondents. The table shows that 139 respondents (40.4%) fall within the age range of 15 to 25; 47 respondents (13.7%) fall within the age range of 26 to 36; 79 respondents (23.0%) fall within the age range of 37 to 47; 59 respondents (17.2%) fall within the age range of 48 to 58; and 20 respondents (5.8%) fall within the age range of 59 and above. The value of the mean shows that majority of the active salespeople are 35 year old.

From the table 2, 232 respondents (67.4%) were male; and 112 respondents (32.6%) were female. The mode of this gender (232) implies that majority of the respondents were male. The implication of this is that the male salespeople have responsibilities they have assumed in their social group which forced them into taking the sales of herbal medicine in the study area.

From the table 2, 125 respondents (36.3%) were single; 132 respondents (38.2%) were married; 72 respondents (20.9%) were divorcee; and 15 respondents (4.4%) were widow(er). The mode of this marital status (132) shows that majority of the respondent are married. It is believed that the economic condition of Kogi State may have translated into the take-up of sales job, since the survival of the family unit is highly paramount to an average Kogite.

Table 2 shows that 64 respondents (18.6%) reported that they hold first school leaving certificate; 184 respondents (53.5%) hold senior school certificate; and 96 respondents (27.9%) hold higher institution certificate. The mode (184) shows that majority of the respondent were senior school certificate holders.

## 5. RESULTS AND DISCUSSION

This section deals with the analysis of variables from which results are presented in the tables as follows and are qualitatively interpreted.

**Table 3** Showing T-test of the sales leadership styles of Herbal Mixture Marketers in Kogi State

Adoption		Transformational leadership	Transformational leadership	T-test	P-value
Team spirit building	M	4.01	2.16	21.730	0.01
	SD	1.125	1.208		
Welfare concern	M	1.88	1.39	7.214	0.01
	SD	1.103	0.736		
Carrot & Stick reward system	M	1.83	2.77	9.596	0.01
	SD	1.036	1.446		
Performance focus	M	2.61	2.06	6.697	0.01
	SD	1.559	0.976		

Note: \*Significant at the .01; M- Mean; SD- Standard Deviation

Table 3 shows the differences between transformational and transactional sales leadership. The mean of the team spirit building for transformational sales leadership is 4.01 (standard deviation= 1.125) and the mean of the team spirit building for transactional sales leadership is 2.16 (standard deviation= 1.208). The standard deviation of the team spirit building of the transformational and transactional sales leadership shows

divergence. The T-test value of 21.730 appears to be significant. This shows a clear difference in team spirit building adoption between transformational and transactional sales leadership of Herbal Mixture Marketing Organizations in Kogi State.

Table 3 shows that transformational sales leaders have more welfare concern with the mean of 1.88 (standard deviation= 1.103) compared to the transactional sales leaders with the mean of 1.39 (standard deviation= 0.736). Still, the observed difference seems to be very little based on the compared mean scores. The T-test value of 7.214 is significant. This result shows that transformational sales leaders have little more welfare concern than transactional sales leaders of Herbal Mixture Marketing Organizations in Kogi State.

Table 3 shows that the mean score of 1.83 (standard deviation= 1.036) of adoption of carrot and stick reward system by transformational sales leadership is less than the mean score of 2.77 (standard deviation= 1.446) of adoption of carrot and stick reward system by transactional sales leadership. The T-test value of 9.596 is significant at 0.01. This result shows that transactional sales leaders adopt more of carrot and stick reward system than transformational sales leaders of Herbal Mixture Marketing Organizations in Kogi State.

Table 3 shows that the performance focus of transformational sales leaders with the mean of 2.61 (standard deviation= 1.559) is more than that of transactional sales leaders with the mean of 2.06 (standard deviation= 0.976). The T-test value of 6.697 is significant at 0.01. This result shows that the performance focus of transformational sales leaders is significantly different from that of transactional sales leaders. Still, the margin of the adoption mean of performance focus between the two categories of sales leaders of Herbal Mixture Marketing Organizations in Kogi State is not wide enough. This finding aligns with the assertion of Judge & Piccolo (2004) that transformational leadership concentrates more on job performance.

**Table 4** Showing the correlation among team spirit building, welfare concern and carrot & stick system

Variables	Mean	Correlations		
		1	2	3
Team spirit building	6.17	1		
Welfare Concern	3.27	.136*	1	
Carrot & Stick System	4.60	-.130*	.459*	1

Note: \* Significant at the .001

The mean for the team spirit building, welfare concern, and carrot & stick system is presented in Table 4. Correlations between team spirit building, welfare concern, and carrot & stick system are also presented in Table 3. The Table shows that there was a significant positive correlation between team spirit building and welfare concern ( $r = .136$ ,  $p = 0.01$ ). The implication of this is that there is likelihood of salespeople building more team spirit when their welfare is strategically prioritized. Based on the result, the level of focus on salesperson's welfare may bring about similar proportion in the level at which salespeople build more spirit within team. Meanwhile, a significant positive correlation was also found between welfare concern and carrot & stick system ( $r = .459$ ,  $p = 0.01$ ). This implies that managers who focus on the welfare of the salespeople also adopt carrot and stick approach in Kogi State. Where more concern is given to welfares,

carrot and stick approach is likely to take another dimension; as most managers do not willingly commit themselves into doing this to enhance salespeople's job satisfaction, but for the actualization of predetermined goals. The rationale behind this is that they take praise and get rewarded for high performance, and tagged "bad signal" for unacceptable performance which may often lead to firing. The correlation between team spirit building and carrot & stick system is found negative ( $r = -.130$ ,  $p = 0.01$ ). The implication of this is that the salespeople's team spirit reduces as the carrot & stick system is strengthened. However, the correlation among these three variables is found weak with varying degree.

**Table 5** Summary of multiple regression analysis of potential covariates with salespeople's performance

Covariate	Coefficients ( $\beta$ )	Standard Error ( $\beta$ )	Value of t-statistics	Value of R <sup>2</sup>
Team spirit building	-.014	.045	.224	
Welfare Concern	.010	.054	8.495*	.621*
Carrot & Stick System	.462	.041	15.151*	

Note: \*Significant at the .01 level

Table 5 shows that 62.1% of the variation in salespeople's performance is explained by covariates (such as team spirit building, welfare concern and carrot & stick system). The presence of 37.9% unexplained variation suggests that there are other predictor variables which affect variations in salespeople's performance in the Herbal Mixture Marketing Organizations in Kogi State. The co-efficient for team spirit building ( $-0.014$ ,  $p = 0.01$ ); welfare concern ( $0.010$ ,  $p = 0.01$ ); and carrot & stick system ( $0.462$ ,  $p = 0.01$ ) show that relationship within the three variables.

The result proves that 1.4% change in team spirit building brings about proportional decrease in salespeople's performance in the study area. This may be as a result of the appearance of other unexplained factors in this study area. The apriori expectation would have been that increase in team spirit building will in turn enhance increase in performance level. The T-statistics (0.224) indicate that differences in individual performance of salespeople are not significantly demonstrated by team spirit building. The result also shows that increasing welfare concern will lead to increasing salespeople's performance at the study area. Though the effect is almost not explicit (as at 1%) enough, but it implies that change in welfare concern for salespeople will bring about proportional change in their performance level. The T-statistics (8.495) indicate that the differences in individual performance of salespeople are significantly demonstrated by how well the salespeople are given welfare concern.

The result further shows that 46.2% change in the adoption and implementation level of carrot & stick system will lead to proportional change in the performance of salespeople in the study area. The T-statistics (15.151) indicate that the differences in individual performance of salespeople are significantly affected by adoption and implementation level of carrot & stick system.

## 6. CONCLUSION

The differences between transformational and transactional sales leadership is evident, and the practice of these leadership approaches may vary from country to country, region to region and culture to culture. In Kogi State, transformational sales leaders appear to focus more on team spirit building and welfare of salespeople than transactional sales leaders. On the contrary, transactional sales leaders adopt less of carrot and stick reward system compared to transformational sales leaders. Although both transformational and transactional sales leaders of Herbal Mixture Marketing Organizations in Kogi State pursue high performance through their various approaches adopted, empirical verification proves a slight difference as the former is seen to strategically focus on performance achievement than the later. In addition, there is significant positive relationship between these variables except team spirit building and carrot & stick system whose relationship is significantly negative.

However, team spirit building, welfare concern and carrot & stick system have very strong effect on salespeople's performance. Where welfare concern and carrot & stick system appear to be positively influencing salespeople's performance, team spirit building appears to be contrary at almost the same percentage. This will mean that managers may not likely pay more attention on only team spirit building to achieve the salespeople's performance in Kogi State.

This study recommends that:

- i. Herbal Mixture marketing managers should adopt more of transformational sales leadership.
- ii. For Herbal Mixture marketing managers to build strong team spirit among salespeople, more welfare concern should be embraced.
- iii. Herbal Mixture marketing managers should focus more on welfare concern and carrot & stick system so as to enhance desired salespeople's performance.
- iv. Herbal Mixture marketing managers should strategically adopt carrot & stick system. If not adopted strategically, team spirit of salespeople may become low.

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## **LIDERSTVO U PRODAJI I PERFORMANSE PRODAVACA U DRŽAVI KOGI: ISTRAŽIVANJE MARKETING MENADŽERA BILJNIH MEŠAVINA**

*Ovaj rad se fokusira na stilove liderstva i performanse prodavaca u organizacijama za marketing biljnih mešavina u državi Kogi u Nigeriji. Populacija ove studije nije tačno poznata, i stoga je korišćen Bil Goden metod da se odredi uzorak veličine 384. Za terensko istraživanje korišćen je instrument strukturisanog upitnika. Studija je analizirala podatke metodom deskriptivne statistike, T-testova, korelacije i višestruke regresije. Nalazi ukazuju da postoje značajne razlike između transformacionih i transakcionih lidera u prodaji u organizacijama za marketing biljnih mešavina u državi Kogi u Nigeriji. Dalji nalazi pokazuju da briga za dobrobit prodavaca i sistem štapa i šargarepe imaju značajan pozitivni uticaj na performanse prodavaca, dok je efekat izgradnje timskog duha (timbuildinga) negativan. Studija zaključuje da su razlike između transformacionog i transakcionog stila liderstva u prodaji očigledne, i da se prakse ovih pristupa liderstvu mogu razlikovati od zemlje do zemlje, regiona do regiona, kulture do kulture. Studija stoga preporučuje da marketing menadžeri biljnih mešavina treba da prihvate više transformacionog stila u liderstvu i da se više strateški fokusiraju na dobiti i sistem štapa i šargarepe kako bi poboljšali željene performaske prodavaca.*

*Ključne reči: transformacioni stil liderstva u prodaji, transakcioni stil liderstva u prodaji, dobrobit, sistem štapa i šargarepe, timbuilding*



## **FACTORS AFFECTING CUSTOMER LOYALTY IN THE BUSINESS MARKET - AN EMPIRICAL STUDY IN THE REPUBLIC OF SERBIA**

*UDC 336.1(497.11)*

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**Abstract.** *In modern business conditions characterized by the requirements for achieving superior profit margins, customer satisfaction and loyalty have become the basic company business priorities. The ability of the company to achieve a high level of customer loyalty, in conditions of intense competition is determined by delivery of superior quality service, but also by creating a positive overall customer experience with the company. Such a situation implies the relationship development based on the trust and commitment of the buyer to the supplier. The aim of the paper is to investigate the impact of satisfaction, trust, buyer loyalty and perceived quality of services on the level of achieved loyalty. Empirical research was carried out on a sample of small and medium-sized enterprises in order to identify loyal and disloyal customers. Statistical analysis is based on the application of multivariate techniques that enabled simultaneous analysis of the mutual relationship between the identified four independent variables on the dependent variable, i.e. on degree of buyer loyalty.*

**Key words:** *customers, loyalty, satisfaction, trust, commitment, business market*

**JEL Classification:** M310, M210

### INTRODUCTION

One of the most important problems of perfect marketing theory and practice is how to keep the customer, make him satisfied and loyal for a long period of time. Instead of focusing on attracting new customers and creating transactions, companies are increasingly focusing on delivering superior value to consumers and on building long-

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term relationships with customers in order to keep them. The retention of existing ones in relation to the conquest of new consumers is conditioned, above all, by intense competitive pressures, visible changes in customer behavior and high cost of acquisitions. Creation of satisfaction and loyalty in such conditions requires the companies to deliver high quality services as the preconditions for developing the trust and loyalty of the buyer (Mital & Kamakura, 2001). Both learning and feedback with customers are the source of valuable information about their future requirements, shopping intentions and consumption (Paquette, 2006).

The problem of customer retention is noticeable in the business market where the success of a company is limited by a small number of worthy customers, and where the interdependence relationship between sellers and customers is a limiting factor of business success. Being informed and professionalism of business customers, as well as the dominance of rational motives in decision-making process, increase their negotiating strength and power and make difficulties for companies to support long-term loyalty. This has led to a number of theoretical considerations and empirical research on how to achieve consumer loyalty and identify factors that motivate / demotivate such customer behavior.

Starting from the above, the main goal of the paper is to identify and determine the significance of certain factors in order to improve customer loyalty. Starting with the identified factors of loyalty, the research objectives are: customer satisfaction, customer trust and commitment, and importance of perceived quality of service for loyalty enhancement. The work consists of two parts. In the first part of the paper, a literature review of significance and method of customer loyalty insurance is given, while the second part of the paper explains the methodology and presents results of the empirical research, their discussion and reached conclusions.

## 1. THEORETICAL BACKGROUNDS

### 1.1. Significance and problems in ensuring customer loyalty

Ensuring a high level of customer loyalty is one of the most important tasks of modern management. Preference of retaining the existing ones toward winning new customers is conditioned, primarily, by intense competitive pressures, customer demands and high costs to get them. The most effective way to keep buyers in such conditions are to build loyalty by continued assurance of satisfaction and by creating high costs of switching to other brands. Loyal customers are important "assets" of companies and profit generators. A positive relationship between customer loyalty, profit and company's competitive advantage has been confirmed by numerous studies (Kumar & Shah, 2004; Gruca & Rego, 2005; Kotler & Keller, 2007; Kumar et al., 2011). They regularly repeat purchases, often buy a complete line of products and /or services, show lower sensitivity to price changes, tie-up for longer to the company, demonstrate immunity to competition. Increase in profit is the result of lower costs for servicing of existing ones than the costs of getting new customers (Kotler & Keller, 2007). Loyal customers also show the so-called active loyalty, i.e. they recommend the company and its brands to other customers, which leads to greater business stability, growth and profitability of the company (Diller, 2000; Gruca & Rego, 2005; Rust & Ming-Hui, 2014).

The problems in ensuring customer loyalty in modern business conditions have caused numerous theoretical considerations and empirical research dedicated to identifying the factors which lead to such customer behavior. The starting point in the measurement is the realization of essential loyalty. Satisfaction is a necessary, but not sufficient, requirement of essential customer loyalty. The relationship between satisfaction and loyalty, due to the action of many factors, is complex and not always proportional. The positive attitude of buyers is also not a guarantee of a focal mark repurchasing, if such a decision is more pronounced towards another brand. In order to maintain long-term loyalty, the power of the consumer positive attitude is necessary, and the strong attitude differentiation compared to other brands that shows a tendency towards future behavior (Kumar & Shah, 2004). This means that the product and/or brand should represent the best alternative choice for the customer to remain loyal. Therefore, customer loyalty measurement is based on a combination of loyalty behavior and loyalty attitude. The behavior of buyers takes a consistent repetition of behavior. Measuring customer attitudes, on the other hand, is based on information about attitudes that reflect the emotional and psychological aspect of loyalty.

Measuring the emotional aspect of customer loyalty emphasizes the importance of factors that imply feeling, committing, trusting. Moorman et al. (1993) consider that the customer's confidence, the involvement of customers in value creation, customer loyalty and perceived quality, are the most important factors that lead to loyalty (Moorman et al., 1993). Kumar et al. (2011) consider that, except trust and affiliation, the great influence on the overall quality of company's relationship with the buyer, has mutual desire to invest in relationship development as well as expectations regarding its duration. Later research by the authors distinguishes customer confidence and commitment as key factors of customer loyalty. Bearing in mind the above, it can be concluded that in the research work, the following factors of customer loyalty have been frequently repeated: customer satisfaction, customer trust, customer commitment and perceived quality of service.

## **1.2. Customer loyalty factors**

### *1.2.1. Satisfaction of customers*

Customer satisfaction is an essential factor of their loyalty. The customer satisfaction assessment is based on a comparison of the customer's expectations and post-sales perceptions (Kotler & Keller, 2012). In the meantime, customer satisfaction is the expression of satisfaction or disappointment that arises as a result of the comparison of deliveries and the expectation of value. The result shows that the assessment of the realization of the customer's expectations is individual and can be positive or negative (satisfaction / dissatisfaction). It includes objective and subjective elements related to tangible and intangible aspects of value. It can be based on emotional and rational motives. Kundu & Datta (2015) state that satisfaction is an affirmative, emotional state that is the result of the process of all aspects of the relationship between the partners.

The impact of satisfaction on business performance, on the other hand, can be viewed from two aspects - behavioral and psychological. The first aspect relies on understanding that customer satisfaction influences the resulting behavior, such as: re-purchase (Trasorras et al., 2009), customer loyalty (Bowen & Chen, 2015), giving recommendations to others

(Ulaga & Eggert, 2006), but also purchase cessation, complaints, negative verbal advertising, in case of lower satisfactory degree of complete dissatisfaction.

The second, psychological aspect of customer satisfaction is emphasizing satisfaction dimension that does not have to be linked to the future behavior of the customer, but to his inner feeling, in terms of "with consuming, the customer fulfills some need, desire, goal, etc. which gives satisfaction". This means that the satisfaction has to be viewed as a predictor of coordination and continuity in the process of relation developing (Ulaga & Eggert, 2006). Therefore, through the satisfaction and continuity of the relationship, both sides have to develop desire for growth. The presence of both dimensions determines the cumulative satisfaction which is a necessary but not sufficient condition for buyer's loyalty.

Research of business customers satisfaction is complex. The complexity stems from the complexity of the customer decision-making process, the number of people involved in this process, the number of seller-buyer interactions, and factors that influence satisfaction or dissatisfaction and their transition into measurable attributes. Therefore, research of satisfaction in the business market requires inherent complexity and consideration of multiple aspects and different contexts that affect satisfaction as a managerial phenomenon. Dyad relationship between the buyer and the seller must be studied in the context of a larger set of interorganizational relationships that form a complex context of business purchasing. Various forms of cooperation and partnerships in the business market emphasize more complete survey of the satisfaction and the common nature of involved parties. The achieved satisfaction is seen as a cohesive factor or strength in development of further and deeper relations. In case of long-term relationships, the re-purchase situation is at the same time the pre-purchase situation and the buyer will not repeat his purchase if his expectations are not met. High degree of customer satisfaction often creates confidence and commitment between parties in interaction, which increases customer loyalty and duration of relationships. Involving the customer in production performance and other business processes, results in his partial responsibility for his own satisfaction.

Starting from these facts, the traditional method of determining the satisfaction of business customers with the subsequent evaluation of the completed purchase becomes inadequate because it does not reveal the reasons of satisfaction / dissatisfaction. The focus of modern research is overall satisfaction, i.e., overall performance of the supplier. According to one survey, it can be measured by seven dimensions: product satisfaction, strength of sale, product-related information, ordering process, services, interaction with employees, and satisfaction with complaints solving (Ghijsen et al., 2010). In order to ensure a more realistic approach to investigating customer satisfaction, it is necessary to focus on three areas: the internal context of customer and seller relations, the context of the network, and the context of external influences (Tikkanen et al., 2000).

Starting from the above hypothesis, tested H1 is:

H1: Satisfaction of customers increases their loyalty in the business market.

### *1.2.2. Customer trust*

Trust is an important determinant of the buyer's behavior in the purchasing process. It arises as a result of the overall customer experience with the product and the company, and its tangible and intangible attributes. Trust development generates positive attitudes and customer loyalty (Moreira & Silva, 2015). Trust in brand reduces the customer's

hesitation in the purchasing process which can arise from factors such as: product complexity, purchasing risk, cognitive dissonance, and high transaction costs. A customer who believes in an enterprise becomes a valuable source of information in the process of value creation. Mutual trust of the buyer and company creates conditions for the exchange of important information in the process of value creation and the construction of a long-term, mutually beneficial relationship. It is therefore considered that confidence is an essential factor that leads to long-term customer retention (Moorman et al., 1993; Anderson & Mittal, 2016). Lost trust means a lost customer.

Characteristics of trust based relationships are: cooperation between buyer and seller, first-class, long-term relationships and quality of cooperation. Cooperation is based on the fact that trust reduces uncertainty and risk, which increases the cooperation between the supplier and buyer. From relationships based on trust and cooperation, the seller and buyer learn that mutual activities give better effects than reliance on individual ones. Confidence encourages both sides to work to preserve interpersonal relationship and a desire to overcome potential conflicts. Preference is on long-term benefits. The trust between the company and the buyer means that the customer will become more involved in the process of value creation and mutual business, which contributes to lasting relationship. Confidence-based trusts mean quality cooperation and better exchange of information and knowledge, which increases their usefulness. Misunderstandings and conflicts are resolved in an efficient and friendly manner (Morgan & Hunt, 1994; Moorman et al., 1993; Ndubisi, 2011).

Trust as a factor of loyalty is difficult to understand and anticipate. In order to explain the notion of trust, the majority of authors look for the base in psychology, starting from the partner's belief they will behave in a relationship and act in mutual interest. Such relationships are characterized by: credibility, reliability, intimacy, and self-orientation (Peppers & Rogers, 2004). The first three components are positive in building trust between the buyer and the seller. The trustworthiness of the partners, delivery of the promised, understanding between them, creation of a pleasant atmosphere and the sense of security, strengthen and enhance trust. Common goals and values, interdependence, communication quality and non-opportunistic behavior are the most important factors on which it depends. Open communication, formal and informal, harmonizes expectations, solves doubts and reduces uncertainty. Relations based on trust, loyalty, cooperation and strength of partners enable us to create values in relationships and to strengthen the competitive advantage of partners (Palmatier, 2008; Ndubisi, 2011). Research of credit cooperatives in Brazil has shown that relations between the strength of partners in a dyad relationship, between buyer and a seller, customer confidence, their commitment and cooperation, largely determines the quality of relationships with a central organization.

On the other hand, self-orientation and self-reliance of partners in relationships means predominance of individual and non-synchronized over synchronized and mutual action. The strength of this component is important, because if the customer feels misunderstanding from the company which works for its own benefit, that causes dishonesty and disobedience and that, on the other hand, reduces trust and loyalty of the buyer.

Bearing in mind the above, the tested hypothesis H2 is:

H2: Trust leads to an increase in customer loyalty in the business market.

### *1.2.3. Consumer commitment*

Relations based on trust between seller and buyer are the basis of mutual attachment creation. Quality communication among buyer and seller, synchronized behavior and mutual work create trust and attachment. Together, both factors directly lead to cooperative behavior, long-term relationships based on loyalty (Morgan & Hunt, 1994). Creating affection means that for both buyer and seller relations are important and there is a mutual desire to continue and develop them in the future. It is a power that drives participants to continue their cooperation. Relationships built on trust and commitment are a guarantee that the efforts made to maintain and develop relationships in the future will result in mutual benefits. That strengthens trust and commitment, increases customer loyalty and all performances of relationships.

Commitment as a complex factor can be defined from different points of view. The opinion that the psychological component is crucial for creating attachments, which emphasizes emotional loyalty and engagement of the participants in the relationship, prevails. Affective component of loyalty is associated with the long-term orientation of involved parties and with their focus on achieving long-term loyalty and goals, as well as the belief that relations will bring desired results. Such attachment is based on trust, willingness to resolve conflict in a friendly manner, and supports the long-term benefits of relationship. In this sense, the partner behaves in a way he expects from the other side and has confidence in such behavior (Ndubisi, 2011).

Attachment may also arise from the self-interest of a particular party in current relation, as a result of the observed difference between costs and benefits (economic, social and status). In this case, this is so-called prolonged attachment. Normative attachment arises as a result of moral obligations of partners to continue cooperation. The largest number of research connected with the relationship of trust, commitment and loyalty of customers, confirms the high degree of correlation of trust and devotion on the one hand, and retention of customers and future intentions for relationship developing, on the other. Attraction in relationships very often means sensitivity and dependence, which builds relationships that are worthy of the trust of the partner. Continuity of relationships over time motivates companies to work together to achieve goals and mutual benefits. Each side is aware that continued delivery of superior benefits will be valued from the other side, which therefore wants to engage in a relationship.

Starting from the above, the H3 hypothesis is:

H3: There is a strong correlation between customer loyalty and retail sales.

### *1.2.4. Perceived quality of service*

Numerous studies have shown that perceived quality of service is an important determinant of customer satisfaction and loyalty (Lovelock & Wirtz, 2011; Wilson et al., 2012; Moreira & Silva, 2015). This influence can be reached through degree of satisfaction, considering that the concept of customer satisfaction and service quality concept are connected, and often they are identifiable. Starting from that point, one can speak of a linear relationship between the quality of service and satisfaction, which means that a higher level of service quality leads to a higher level of customer satisfaction. There is also a perception that the quality of service is not the only determinant of customer satisfaction, even if it is often crucial (Veljković, 2009). According to this opinion,

besides the quality of services, customer satisfaction is determined also by other elements (quality of the accompanying product, prices, situation factors and personal factors). Research based on such insight did not show a strong correlation between the perceived quality of services from users and their satisfaction, especially when it comes to certain elements of service quality.

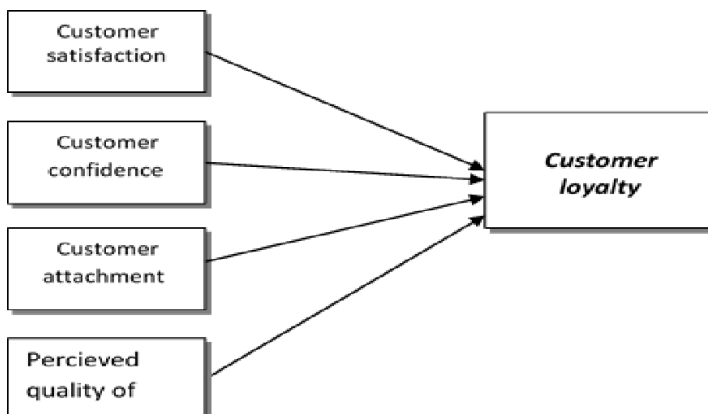
The problem of the quality of service measurement comes out from the complexity and multidimensionality of the concept of service quality (Jain & Gupta, 2004). The service's intangibility is one of the key reasons for this. Therefore, there is no author's consent in terms of defining the quality of services. Dominant opinion is that the quality of service comes out from the compliance with customer expectations, i.e., it is the result of their comparison between expectations and their perceptions of services to be provided (Caruna et al., 2000). The emphasis that the overall quality assessment depends on evaluation of the benefits provided by the particular service, and also on the process of its delivery, points to complexity and multidimensionality of the service quality concept. Comparatively, the consent of authors matches the belief of Pollack (2008) that there are three basic elements of service quality: the quality of results (the actual result of service contact), the quality of interaction (estimation of overall customer relationship with the service staff) and the quality of service environment (physical environment where interaction occurs).

Starting from the above, the hypothesis H4 is:

H4: Perceived quality increases customer loyalty in the business market.

## 2. METHODOLOGY OF RESEARCH

The aim of the research is to examine factors that influence the loyalty of customers. The basic research question for which the empirical research was supposed to provide the answer is: Is there a statistically positive correlation between customer loyalty and loyalty factors - customer satisfaction, trust, customer loyalty and perceived quality of services?



**Fig. 1** Model of conditionality of customer loyalty

*Source: Authors, Adapted to: Rauyruen & Miller (2007)*

Starting from the set goals, we tried to check the following hypotheses:

H1: Satisfaction of customers increases their loyalty in the business market.

H2: Trust leads to an increase in customer loyalty in the business market.

H3: There is a strong correlation between customer loyalty and customer commitment in the business market.

H4: Perceived quality increases customer loyalty in the business market.

In order to identify the significance of each factor of loyalty in the business market, the research used a model that includes four independent variables (customer satisfaction, customer trust, customer commitment, and perceived quality of service) and customer loyalty as a dependent variable (Figure 1).

In order to test the hypotheses, the empirical research was conducted. Respondents' opinions were recorded on the 5-fold Likert scale, where 1 indicates "I do not agree in general", while 5 means "I completely agree". The sample was made up of small, average and big companies i.e. of small shops, specialized shops and cafes from the territory of southeastern Serbia (Pčinja, Jablanica, Nis, Toplica, Zajecar and Pirot districts). One hundred and fifty questionnaires were distributed and all were completed and processed. Research was conducted from 06.05.2018 until 10.5.2018. Descriptive statistics, correlation and multiple regression analysis methods were used in statistical analysis.

A questionnaire was used as a tool for collecting information. The questionnaire was created based on the idea of Woon et al. (2015) and consists of two parts. The questions in the first part of the questionnaire refer to general customer data (customer size, length of cooperation, purchase frequency). In the second part, questions refer to investigated dimensions of loyalty, i.e., loyalty factors. Loyalty as a dependent variable was measured through four dimensions (questions L1-L4), while independent variables: (1) Customer satisfaction was measured through two dimensions (questions S1-S2), (2) Commitment was measured through three dimensions (PR1-PR3 questions), (3) Trust through three dimensions (PO1-PO3) and Quality perception was also measured through three dimensions (PER1-PER3), which can be seen in Table 1.

### 3. RESULTS OF THE RESEARCH AND DISCUSSION

In order to obtain a better picture of observed indicators value taken into consideration when analyzing the loyalty of customers from the sample, descriptive measures were first determined, which is shown in Table 1. According to these data, the average rating of loyalty provided by customers, measured through four dimensions, is 4.26, with a standard deviation of 0.87. The highest average grade was given in answers for Perception of quality questions and it was 4.51. This estimate also has the lowest standard deviation - 0.67, which clearly indicates that customers give great importance to the quality of products. The least average rating was given by the Customers to Attachment dimension and it is 4.18 with a standard deviation of 0.83.

Table 2 provides data for correlation between variables. According to this table, we conclude that there is a strong direct connection between dependent and independent variables, i.e. between customer loyalty and the factors on which it depends. According to Cohen (1988), the value of the Pearson correlation coefficient by 0.3 indicates a weak correlation between phenomena; the value of this coefficient between 0.30 and 0.5



indicates average, and over 0.5 a strong relationship between phenomena. Bearing in mind the above-mentioned scale for interpreting the strength of the correlation link, we find that the values of the Pearson coefficient of correlation between dependent variable and independent variables are over 0.5, and we can conclude that this bond is strong. Also, all the coefficients are significant at the level of 0.01.

**Table 1** Descriptive statistics

Question number	Question	Average rating	Standard deviation
	<b>Customer satisfaction</b>	<b>4.24</b>	<b>0.79</b>
S1	Supplier always meets my expectations	4.13	.87
S2	Satisfied with the cooperation with the supplier	4.35	.72
	<b>Commitment</b>	<b>4.18</b>	<b>0.83</b>
PR1	Very attached to supplier	3.74	1.05
PR2	I will continue to cooperate with supplier	4.43	.746
PR3	It is important for me to maintain good business relationships with supplier	4.39	.703
	<b>Trust</b>	<b>4.30</b>	<b>0.79</b>
PO1	Ready to rely on suppliers' products	4.09	.89
PO2	Have trust in supplier	4.31	.84
PO3	Consider employees professional and responsible	4.51	.65
	<b>Quality perception</b>	<b>4.51</b>	<b>0.67</b>
PER1	Product quality corresponds to declared	4.40	.73
PER2	Staff is professional	4.59	.59
PER3	Payment terms are correct	4.56	.69
	<b>Customer loyalty</b>	<b>4.26</b>	<b>0.87</b>
L1	I would recommend suppliers to business partners	4.41	.80
L2	Supplier is my first purchase choice	4.01	1.10
L3	I plan to stay with supplier in next few years	4.36	.77
L4	Consider myself a loyal customer of a given supplier	4.28	.82

*Source: Calculation of authors*

Having in mind the data from Table 2, we conclude that we have proved all four hypotheses; we have proved that there is a strong direct correlation between customer loyalty and determination factors. Research results prove that the strongest quantitative match is between customer loyalty and commitment, and the weakest is between customer loyalty and satisfaction. That confirms results of many studies by which satisfaction is necessary but not sufficient condition for the loyal behavior of the buyer (Tikkanen et al., 2000; Ghijsen et al., 2010). Apart from the fact that the customer is satisfied with the company that meets his expectations, the key factor for customer engagement is continuity of cooperation, which shows that both buyer and seller are important and there is a mutual desire to continue and develop it in the future.

**Table 2** Correlation

	Customer loyalty	Satisfaction	Trust	Commitment	Quality perception
Customer loyalty	1	.541**	.813**	.741**	.656**
Satisfaction		1	.590**	.611**	.376**
Trust			1	.736**	.613**
Commitment				1	.617**
Quality perception					1

\*\* Level of significance 0.01

Source: Calculation of authors

The mutual relationship of loyalty and the conditioning factor were examined by applying the multiple regression analysis. Based on the data from Table 3, it can be seen that changes in customer loyalty are explained by 72.5% of changes in independent variables, i.e. with factor changes by which loyalty is conditioned. If stricter criterion is explained, given as a corrected coefficient of multiple determination, it is somewhat smaller, and according to it, the degree of explained variability is 71.8%.

**Table 3** Regression

	Beta		Sig.
	Unstandardized	Standardized	
(Constant)	-.338		.228
Satisfaction	.026	.027	.636
Trust	.532	.509	.000
Commitment	.257	.232	.001
Quality perception	.257	.191	.001
R	.852		
R Square	.725		
Adjusted R Square	.718		

Source: Calculation of authors

As shown in Beta Standardized column, *Commitment* has the highest absolute value, this means that this variable individually has the greatest contribution to the explanation of dependent variable, i.e., *Commitment* has a dominant influence on customer loyalty. The smallest contribution to changes in dependent variable has *Satisfaction*. In addition, it should be noted that the significance of this coefficient has not been proven, and this factor should be excluded from further analysis. If we look at the non-standardized values of the regression coefficients, we have another proof of direct dependence between the loyalty and the factors it is conditioned upon. In this way we confirmed the starting hypotheses once again.

## CONCLUSION

Customer satisfaction and loyalty measurement is an important segment of marketing control in order to gather information on what is necessary for customers to repeat their purchase and to decide whether that is sufficient for essential loyalty. Measuring of customer loyalty in the business market is complex and often linked with the subjectivity of researchers. Often, researchers in customer loyalty measurements are focused on

delivered product / service quality measuring. Repeated purchases can, on the other hand, be an important indicator, but due to preferences, it is not enough to provide essential loyalty. The essence of customer loyalty measuring is getting feedback that determines their long-term repetition of buying and pursuing it in spite of competing pressures.

Customer satisfaction is an important indicator of customer loyalty, but it is not sufficient. Customers may be happy, but they do not have to repeat shopping from the same company. According to that, satisfaction involves cooperation and information exchange with the company. Main requirement is existence of mutual trust with sharing sensitive information in the process of creating value for customers, and developing a long-term relationship with them. Trust creates customer loyalty which explicitly and implicitly means that an open, frequent and honest communication will develop. Such communication increases credibility, reliability and intimacy, and reduces doubt, uncertainty, one-sided orientation and preoccupation. Trust improves customer responsiveness, especially emotional, which increases customer readiness to cooperate and engage more in relationships.

It has been proved in the paper that there is a strong direct correlation between the loyalty factor of the buyer and the loyalty. In this way, the influence of attachment is the strongest. This means that in positioning of long-term relationships, it is necessary to strengthen emotional loyalty aspect of customer loyalty. Such distinction is connected with the long-term orientation of the involved parties and their focus on the achievement of long-term loyalty and goals, as well as the belief that relations will get the desired results. Such attachment is based on trust, readiness to resolve conflict in a friendly manner and support the long-term benefits of relationship.

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## FAKTORI KOJI UTIČU NA LOJALNOST KUPACA NA POSLOVNOM TRŽIŠTU – EMPIRIJSKA STUDIJA U REPUBLICI SRBIJI

*U savremenim uslovima poslovanja koje karakterišu zahtevi za ostvarenje superiornih profitnih marži, satisfakcija i lojalnost kupca su postali osnovni poslovni prioriteti preduzeća. Sposobnost preduzeća da ostvari visoku stopu lojalnosti kupaca u uslovima intenzivne konkurencije uslovljena je isporukom usluge superiornog kvaliteta, ali i stvaranjem pozitivnog ukupnog iskustva kupca sa preduzećem. Takva situacija podrazumeva razvijanje odnosa koji se zasnivaju na poverenju i privrženosti kupca preduzeću i njegovim markama. Cilj autora u radu je da istraže uticaj satisfakcije, poverenja, privrženost kupca i percipiranog kvaliteta usluga na stepen ostvarene lojalnost. Empirijsko istraživanje je realizovano na uzorku malih i srednjih preduzeća u cilju istraživanja povezanosti lojalnosti i faktora kojima je ona uslovljena. Statistička analiza zasnovana je na primeni multivarijacionih tehnika koje su omogućile simultanu analizu međusobnog odnosa između identifikovane četiri nezavisne varijable na zavisnu varijablu, odnosno na stepen lojalnosti kupca. U tom smislu je korišćena višestuka regresiona i korelaciona analiza.*

*Ključne reči: potrošači, lojalnost, satisfakcija, poverenje, privrženost, poslovno tržište*

## **IMAGE OF FUJIAN PROVINCE AS A TOURIST DESTINATION – A FOREIGNER’S PERSPECTIVE**

*UDC 338.48:336.1(510)*

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**Abstract.** *The effect of destination image on tourist behavior was studied on many occasions. This article aims to identify the image of Fujian province as a tourist destination in international markets, in order to support a discussion on how to improve tourism experience for foreign tourists. As the basis for the analysis are the results from an online survey, distributed to foreigners who have visited or lived in Fujian province, and in-person interviews. Research found that the overall image of Fujian province is positive and that 50.5 % of respondents stated that the main reason for visiting Fujian were holidays, 20% of the respondents had their trips arranged by an agency, 32% stayed in Fujian province for more than 6 months and most of the respondents stated that “nature” should be used in international promotion of Fujian. These results may indicate that there is a need for a repositioning of the image by the introduction of new elements in the promotional messages. The international tourism market recognizes and appreciates the destination – Fujian province in China. The reflections presented may be of great use for the decision makers in charge of international tourism promotion. This article analyzes how foreign tourists perceive Fujian province, which has not been done before, and it is a first step in improving the international image of Fujian province which will help attract more international tourists.*

**Key words:** *Fujian province, Destination’s image, Tourism consumer trends, Promotional campaigns*

**JEL Classification:** Z32

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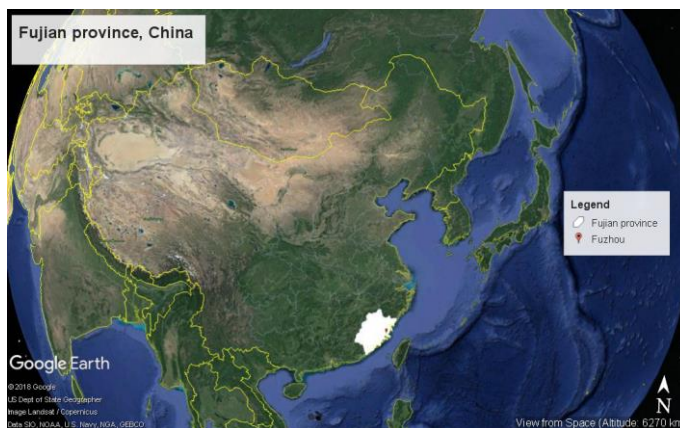
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## INTRODUCTION

Fujian is a province on the southeast coast of People's Republic of China (PRC), being the sixteenth most populated province, with the population of 36,894,216 people, covering the area of 121,400 km<sup>2</sup>, and having the tenth highest GDP in PRC with 3.9% of the total GDP of PRC. Coordinates of the province are: 25°54'N 118°18'E. The provincial capital of Fujian is Fuzhou city and the largest city is Quanzhou, with Xiamen being the only sub-provincial city, which means that it is governed by a province, but is administered independently in regard to economy and law. Fujian province has three international airports: one in Fuzhou, Quanzhou and Xiamen, and three domestic airports: one in Longyan, Sanming and Wuyishan. Railroads are also very well developed, connecting not only cities within Fujian province but connecting Fujian with other provinces. Some of the major railroads include Nanchang, Jiangxi province – Xiamen, Chongqing Municipality – Fuzhou, Ganzhou, Jiangxi province – Jiangsu province, which passes through several cities in Fujian, Shenzhen, Guangdong province - Hangzhou, Zhejiang province, which passes through several cities in Fujian, Shanghai – Ganzhou, which passes through several cities in Fujian and Beijing – Fuzhou amongst others.



**Fig. 1** Location of Fujian  
Source: Google Earth

Fujian province has rich and unique natural resources that are a predisposition for good tourism development. Three out of fifty two locations in China from UNESCO World Heritage List are in Fujian province; Fujian Tulou, Gulangyu island in Xiamen, Mount Wuyi and Danxia landform in Taining. Due to the big tourism potential that Fujian province has, provincial government is putting great attention on tourism personnel training as well as promoting Fujian as a touristic destination. As a part of this strategy at the end of 2013 provincial government of Fujian province made a campaign by the name of 'Refreshing Fujian' which is to promote Fujian province as an eco-touristic destination. Fujian province's image as a touristic destination has been under development for a long time but campaign 'Refreshing Fujian' wants to position Fujian province as one of the eco-friendly touristic spots in mainland China and is trying to promote its touristic activities. In 2014 the 'Refreshing Fujian' ad campaign started broadcasting on national television and presented nine municipal cities of Fujian which all serve to develop the

image of Fujian province as a touristic destination. When 'Refreshing Fujian' campaign was formed, the provincial government of Fujian province also published seven 'Refreshing Fujian' special tourism standards, some of them included rating the restaurants according to their services, paying more attention to the preservation of the environment, and so on.

Since the implementation of the 'Refreshing Fujian' campaign in 2014 the number of domestic and foreign tourists has increased for 16.8% compared to 2013 and the total number of tourists is 234 million; amongst them 229 million are domestic tourists with an increase of 17.1% from the previous year and 544.98 million are foreign tourists with an increase of 6.4% from the previous year. The total income from tourism industry in Fujian province in 2014 has been increased for 18.4% and it was 270.767 billion RMB. Domestic income from tourism was 240.584 billion RMB with an increase of 20.1%, and income from international tourists was 4.912 billion USD with an increase of 7.4%. Income from tourism in Fujian province in 2015 has increased 14% from 2014 and the number of tourists was 267 million with an income of 314.151 billion RMB.

Tourism strategy of provincial government is stressing the importance of a good education for tourism personnel and improving the quality of services provided by tourist destinations. It is planned that 7% of provincial GDP comes from tourism industry by the year 2020; the number of tourists reaches 500 million with an annual growth of 15%; tourism income reaches 690 billion RMB with an annual increase of 17%.

This research is exploring the perception of Fujian province as a tourist destination from the foreign tourists' perspective. In order to successfully implement good brand imaging, which is necessary for a successful tourist destination, first it is necessary to see what the current general opinion is. Tourism marketing theories say that the development of tourist destination image is being based on the consumer's rationality and emotionality, and is the result of the combination of these two components. Image of a destination is a crucial factor when a tourist chooses the travel destination; this means that a tourist destination with a strong and consolidated image in the market has a better opportunity of prosperity. This being said, the destination image is one of the most important elements of a tourist destination and it is something that can be a critical factor for the performance of a tourist destination. The success of a destination is relying mainly on success or failure of tourism management (Dominique & Lopesi, 2011).

## 1. LITERATURE REVIEW

Research about tourist destinations began when Clare A. Gunn (1972), an American researcher who used the term 'Destination zone' in the 70s of previous century for the first time and since then it started developing as an important term used in a lot of research (Lv & Zhai, 2016). Mayo and Hunt noticed that the positive image of the destination results in increased number of visits and it is also put forward that the destination image has an important role in the process of making a decision about visiting a particular destination (Gartner & Shen, 1992) (Woodside & Lysonski, 1989) (Walmsley & Young, 1998). Most of the research in this area has been focusing on destination image, which is the term that emerged in the 70s, first used in a PhD thesis of an American researcher J.D. Hunt and ever since has been a hot topic researched all over the world. Even though destination image is a term from the 70s, more than 4 decades later it is still a topic worth of attention and it is still a focus of many tourism research. The reason for the

growing amount of papers researching destination image is the flourishing tourism industry with new international tourist destinations emerging every day. Ban O. (2008) discussed variables which destination image contains and what the five stages in researching the tourist destination image are. The five stage model was used in researching destinations in two countries: United States of America and Thailand, and the stages are the following: selecting the tourist destination which is going to be studied, generating advantageous attributes; classifying the answers and selecting the final advantageous attributes; developing the main value dimensions by classifying and grouping; and finally, developing the open ending questions in order to evaluate the advantageous image (Gartner & Shen, 1992). An essential part of destination image is destination branding, therefore in order to ensure a strong positioning of a destination there has to be a strong brand image. A strong, recognizable brand will help the destination thrive and will create a positive opinion of the destination (Woodside & Lysonski, 1989). Ekinici Y. (2003) explored the relationship between destination image and destination branding and classified brand personality, part of destination branding and destination branding as a part of destination image which is closely related with tourist self-image (Walmsley & Young, 1998). All of these factors affect tourists' interest in a destination so when trying to construct an international tourist destination, branding and image should be greatly considered. In order to be competitive in the tourism market, destinations have to find innovative ways to improve their destination image by positioning, branding (Ban, 2008). A designated area within the territory, or any larger part of the globe, can be described as a tourist destination land. In essence, travel destinations are a combination of travel products, tourism infrastructure and tourist travel experiences. International tourist destination is a destination which attracts a lot of international tourists who came for sightseeing and leisure. It contains the following aspects: firstly, a certain number of domestic and international tourists; secondly, sightseeing, shopping, leisure, meeting, and holiday are some of the many reasons for this destination being an international tourist destination. Finally, tourist destinations include not only scenic spots and places of interest but also facilities and architecture. The basic attributes of tourist destinations are cities, tourism products and scenting attractions, space concept (卜显红 & 王苏洁, 2005) (张立明 & 赵黎明, 2005), tourist motivation (Dayour & Adongo, 2015) (You, O'Leary, Morrison, & Hong, 2000) (Muzapu & Sibanda, 2016), image perception (吴晶, 马耀峰, 郑鹏, & 张春晖., 2011) (Pechlaner, Smeral, & Matzler, 2002) (Law & Cheung, 2010), products (Andrades & Dimanche, 2017), destination image and so on are the components of constructing a tourist destination (贾士义, 冯文勇, & 褚秀彩, 2015). This article will take Fujian province as an example in analyzing what the current positioning of Fujian province from the foreign tourists' perspective is.

## 2. THE CASE OF FUJIAN PROVINCE

This research has been supported by an online questionnaire aimed at and filled by foreign nationals who have visited or lived in Fujian province for some time as well as face to face interviews with some tourists, with an agenda of understanding their views of Fujian province, how satisfied they were, and what the main obstacles they encountered while in Fujian province were. Some of the respondents were visiting tourists and some have been staying in Fujian for some time but are still considered tourists at least when they are touring within the province.



## 2.1. Respondents' demographic information

The sample frame consisted of random sample of 103 valid questionnaires. Since 42.57% of the respondents answered that they are students it is not surprising that 52.58% respondents are in between 25 and 34 years old, 20.79% are aged between 35 and 44, 18.1% are aged between 18 and 24, the same percentage of respondents 2.97% are aged between 45 and 54 and between 55 and 64 and one 1.98% is aged over 64. Ratio of male and female respondents is almost equal, with 50.5% of males, 47.52 females and 1.98% of respondents who would rather not disclose their gender.

As it was mentioned earlier 42.57% of the respondents answered that they are students, 19.8% are teachers, 18.81% are company employees, 7.92% are government employees, the same percentage wrote 'other' and disclosed themselves as researchers, freelancers, musicians etc. Only 2.97% of the respondents are retired, which can be also noticed because of the age marker. As for the respondents' marriage status 56.12% are not married, 38.78% are married and 5.10% are partnered. Income-wise, most of the respondents' monthly income is up to 1000\$; after that are people with up to 500\$, which means that people who visited Fujian province cannot be classified as a group with high income. This shows that people with less income are more likely to visit Fujian than people who earn more than 1000\$ per month.

## 2.2. Methodology and data collection

The study was mainly carried out in Fuzhou city, provincial capital of Fujian but the questionnaires were also distributed to foreign tourists in Xiamen, a sub-provincial city. The questionnaires were mostly distributed on online platforms using an online survey- tool Wenjuan (问卷) which is a tool commonly used for surveys in China. The reason for using Wenjuan as a survey-tool in this research is the specific make up of internet network in PRC, and since most of the participants at the moment of conducting the survey were in China, using a local survey-tool was most appropriate. Besides using an online survey-tool for collecting the data 19.42% of survey was conducted in person, where the respondents were also interviewed after answering the questionnaire to explain some of their responses and give a broad picture of their opinions about traveling in Fujian province. The data was collected over a course of one month, from 1<sup>st</sup> of August until 31<sup>st</sup> of August 2017.

The questionnaire had thirty questions in total, five of them being demographic data questions about the age, gender, country/region of origin, occupation, monthly income and marriage status. In four of the questions respondents were asked to rate some attributes on Likert type-scale of 1 to 5 to the questions: (1) What are your main interests (Nature, adventure, nightlife, culture, health, religion, rest, sport, and visiting friends/relatives) in selecting a destination? (in which 1 = not at all important and 5 = very important); (2) What was the reason (Fujianese traditional culture, Natural Scenery, Tea culture, getting away from daily routine, Learning experience, architecture, weather, sea) for choosing Fujian province for travels? (in which 1 = not at all important and 5 = very important); (3) How would you rate the quality of the following attributes in Fujian province? (Gastronomy, City Tours, Tea, Nature, Overnight tourism, Coastal tourism, Business tourism), (in which 1 = very poor and 5 = very good), (4) How would you assess, in general, the quality of Fujian province tourism promotional campaigns in your country? (in which 1 = very poor and 5 = very good).

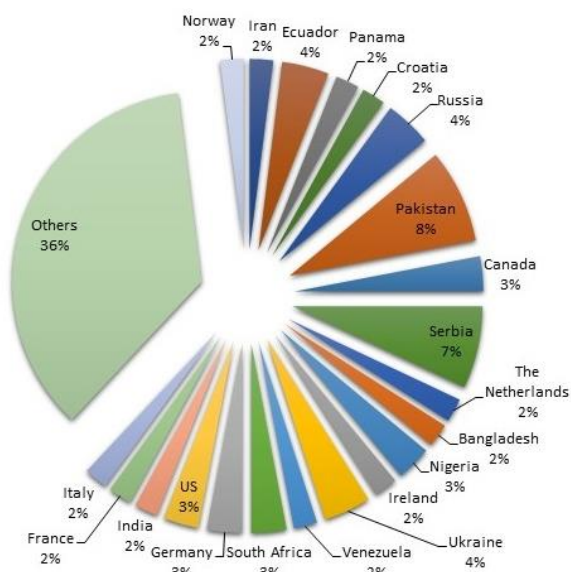
In three of the questions respondents were asked to rate some attributes on Likert type-scale of 1 to 10 to the questions: (1) How would you rate Fujian province as a tourist

destination? (in which 1 = extremely not satisfied and 10 = extremely satisfied); (2) What means of transport (Privately owned bicycle, rented bicycle, Bus, Privately owned Car, Rent-a-car, Taxi, Motorbike, E-bike, Train, Subway) did you use while in Fujian province? (in which 1 = most frequently used and 10 = least frequently used); (3) How would you assess, in general, the quality of Fujian province tourism promotional campaigns on the Internet and social networks? (General Internet websites, blogs, WeChat, Weibo, Facebook, Twitter, Instagram) (in which 1 = extremely not satisfied and 10 = extremely satisfied).

In eleven multiple-choice questions respondents were asked: (1) What are the most challenging problems that you face when choosing a destination?; (2) What was the purpose of your visit?; (3) Were the trips arranged on your own or planned by an agency?; (4) Which places in Fujian province have you visited/lived in?; (5) How did you arrive to Fujian province?; (6) How did you book your accommodation?; (7) In what kind of accommodation did you stay?; (8) Where did you eat while in Fujian province?; (9) Where did you prefer shopping in Fujian province?; (10) What kind of items have you bought in Fujian province?; (11) What kind of night life/entertainment have you experienced in Fujian province, if any; The last type were open questions: (1) How much time did you spend in Fujian province?; (2) What image do you associate with Fujian province as a tourist destination?; (3) In your opinion, what key product should be communicated internationally by Fujian province for promoting this province as a touristic destination?

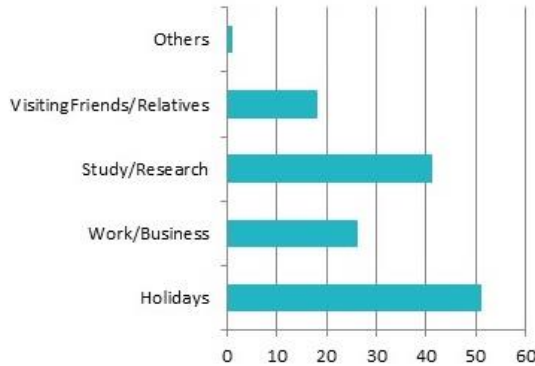
### 2.3. Findings and discussion

All the respondents were of legal age, they did not include tourists from mainland China and they were coming from over fifty countries/regions, as can be seen in Figure 1. 36% of 'others' are marking countries with only one respondent.



**Fig. 2** Respondents' country of origin  
*Source: Authors' calculations*

When asked what was the purpose of their visit to Fujian province, most of the respondents said holidays, 50.5%; in the second place is study or research; after that is work; and the least amount of travelers visited Fujian because of friends or relatives, Figure 2.

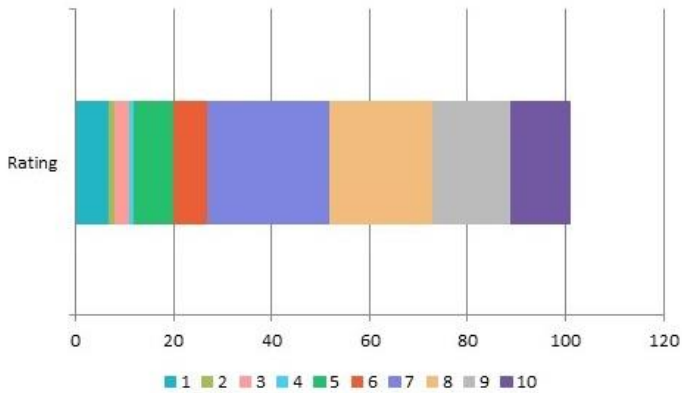


**Fig. 3** Purpose of visits

*Source: Authors' calculations*

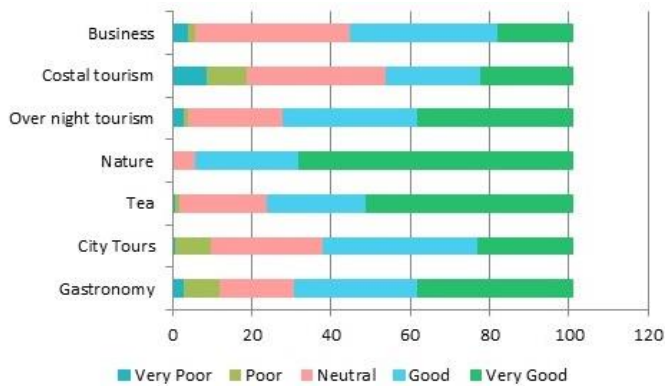
In terms of the reasons why Fujian province was the destination chosen for holidays, natural scenery got the highest rating with an average of 4.44 out of 5 and tea culture got the lowest rating with an average of 3.41 which means that even though tea is one of Fujian province's most valued treasures, foreign tourists are still not that interested in exploring tea culture in Fujian. But the respondents in the open question about what key product should be communicated internationally by Fujian province for promoting this province as a touristic destination, put tea as one of the top products, so this means that tea culture is valued but the promotion of it is not very good and that is the reason for tea culture to get the lowest rating. In an open question about which products of Fujian province should be communicated internationally, 61 respondents suggested tea, 26 traditional foods (minority nationality food, sea food especially fish) and 7 suggested rice wine which is a special product of this area, made by locals called Minnan people. Sometimes the image of a tourism destination promoted and the image tourists get from that promotion can be different. That is why destination branding is necessary to be questioned from time to time so it will be known what image tourists actually have about some destinations (Ekinc, 2003).

In terms of the attractiveness of the destination, the results show that most of the respondents gave rating 7 and also rating 8 is the second highest rating, on a scale of 1-10 (very poor to very attractive), as can be seen in Figure 4. Attractiveness of the destination and influence of destination image in traveler's satisfaction has been researched plenty of times and it has a psychological background. Tourists are severely affected by the destination image when choosing their destination but also when experiencing it first-hand (Chon, 1990).



**Fig. 4** Quality of the experience  
*Source: Authors' calculations*

Regarding the product offer respondents were asked to rate the quality of tourism elements in Fujian province on a scale from very poor to very good. The best-rated elements were nature and tea, and the worst rated were costal tourism and gastronomy, the reason for them being worst rated is because costal tourism in Fujian province is not that developed and well promoted and the problem with gastronomy is not enough special type of restaurants. For example, there are not enough halal restaurants, vegetarian restaurants and people with these and other kinds of special diets had some problems finding an appropriate restaurant for their meals. Sometimes their only option is to prepare food on their own or eat only some simple dishes because of the lack of these kinds of restaurants, as it can be seen in Figure 5.



**Fig. 5** Tourism interests  
*Source: Authors' calculations*

In terms of the international tourism promotional campaigns of Fujian province to assess participants' opinion on this matter, they were asked to rate on a scale from 1 to 5

(1 being the poor 5 being very good) the quality of Fujian province tourism promotional campaigns in their own countries, only 5 respondents rated the quality as very good, total average rating was 2.26, which means that the quality of promotional campaigns abroad are not that good and should improve in order to improve the destination image of Fujian and attract more international tourists.

Regarding respondents' perceptions of the quality of the Web-based and social networks international promotional campaigns of Fujian province, there has been a negative review, most participants assessing the quality of different platforms rated in on a scale of 1-10 (Table 1). Most of the platforms received a negative review with Weibo and Twitter getting the lowest scores and WeChat and Instagram getting the best, but still it is not considered that successful. Respondents are from different countries but still in all of these countries promotional campaigns are done quite poorly which is a big obstacle for making Fujian province an international tourist destination.

**Table 1** Quality of promotional campaigns of Fujian in respondents' country of origin

	1	2	3	4	5	6	7	8	9	10
General Internet websites	20	17	18	10	6	6	8	5	5	6
Blogs	19	17	23	10	9	5	5	5	4	4
WeChat	21	15	16	8	6	10	6	6	2	11
Weibo	40	15	8	9	8	6	2	5	3	5
Facebook	23	19	14	11	11	3	8	3	3	6
Twitter	31	17	22	8	11	2	1	2	2	5
Instagram	24	14	21	11	9	5	3	2	2	10

*Source: Authors' calculations*

When selecting a destination for traveling, the respondents graded their main interests from 1 to 5. (1 being very important 5 being not important) The highest average importance was nature with an average of 1.61 and adventure with 2.54 and the lowest average was rest with 4.17 and health with 4.06, see Table 2. According to these results foreign tourist who visited Fujian province value nature the most so in future nature should be the most important factor in promotion of Fujian as a tourist destination. Image destination is composed from many different variables so besides promoting only one factor other ones with strong appeal to tourists should also be included in the promo campaign (Ban, 2008).

**Table 2** Factors which influence choosing of a destination

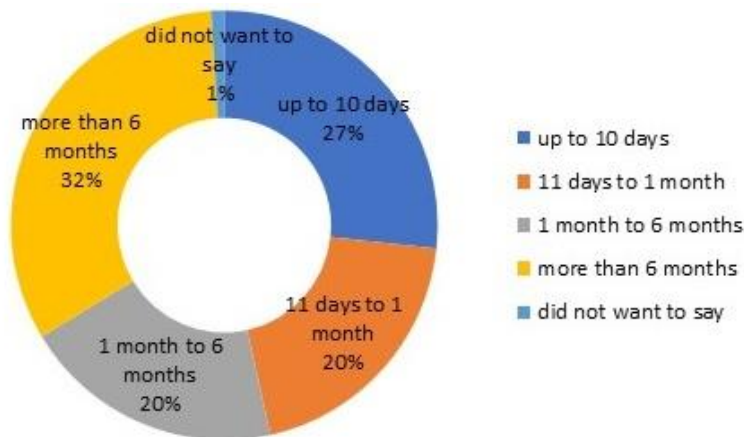
	1	2	3	4	5	Average
Nature	61	21	7	1	5	1.61
Adventure	9	42	24	11	4	2.54
Night life	5	5	19	7	10	3.26
Culture	8	20	30	32	4	3.04
Health	2	2	3	13	15	4.06
Religion	6	2	1	9	6	3.29
Rest	3	1	8	12	28	4.17
Sport	2	1	1	9	10	4.04
Visiting friends/relatives	2	4	5	4	16	3.90

*Source: Authors' calculations*

According to the results, problems/difficulties foreign tourists encounter when choosing travel destination are prices and language difficulties. Language difficulty problem can be extended to whole China, not only Fujian province. Limited English language skills of the personnel working in the tourism industry, limited access to online maps in English language and also lack of English language public transportation signs. All of this creates a language barrier for foreign tourists who cannot speak Chinese and makes it difficult for finding their way around without a help from a Chinese-speaking person.

One of the differences between Chinese and foreign tourists is that Chinese tourists prefer to have their trips arranged by an agency and foreign tourists prefer to arrange the trips by themselves which this research also proves. 80% of the respondents of this questionnaire said that when coming to Fujian province they arranged the trips by themselves and only 20% had their trips arranged by an agency.

Respondents answered an open question on how long did they stay in Fujian province and according to their answers they were classified into five groups. The most respondents 32% were in Fujian for more than six months, 27% of respondents stayed in Fujian province up to 10 days, 11 days to 1 month and 1 month to 6 months the total of 40% marked as their answer, which means 20% from the each group. There was also 1% who did not want to disclose how long they stayed in Fujian province, as can be seen in Figure 6.



**Fig. 6** Time spent in Fujian province

*Source: Authors' calculations*

As to where the respondents travelled within Fujian province most of them visited Fuzhou, which is not surprising since the base location of this research is in Fuzhou, after that is Xiamen, Fujian Tulu, also called Fujian earthen buildings and Wuyi Mountain, see Table 3. Besides the options given in the questionnaire some of the respondents also visited Putian, Taining, Pingtan and others. Even though Tea fields of Anxi county was not in the top places respondents visited, still a fair amount of tourists visited it. Anxi County is considered to be “Tea Capital of South Fujian” and because of it, it deserves better promotion as a touristic destination. Amongst domestic tourists Anxi is one of the must visit places in Fujian province but a lot of interviewed foreign tourist never even

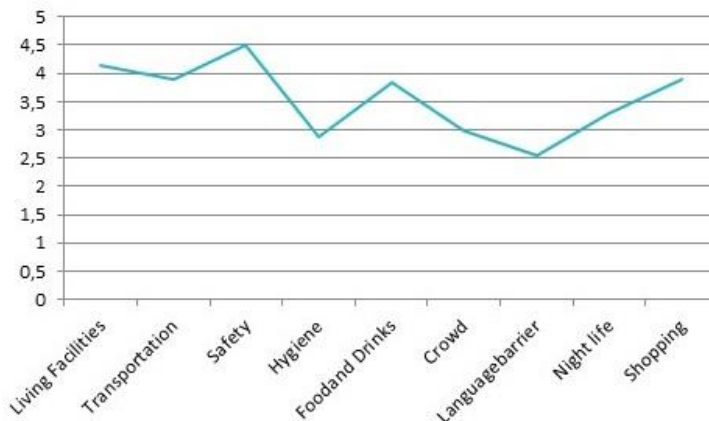
heard of this place. It is essential that promotional campaigns aiming at international markets are created to appeal to the interests of more international tourists.

**Table 3** Places visited by respondents

Places	Number of the respondents
Fuzhou	73
Xiamen	58
Quanzhou	24
Zhangzhou	20
Wuyi Mountain	31
Tea fields of Anxi county	15
Fujian Tulou (Fujian earthen buildings)	33
Others	14

*Source: Authors' calculations*

A lot of variables can affect the satisfaction rate of tourists; one of these variables is cultural background (Weiermair, 2000). In case of Fujian province, respondents rated food and drinks with an average grade 3.83, on 1 to 5 rating scale, but it is quite interesting that people coming from different cultural backgrounds rated this factor differently. People with special kinds of diets (halal, vegetarian, kosher) rated food and drinks in Fujian very low, but on the other hand people who do not follow any kind of special diets or do not have any allergies rated food and drinks in Fujian very high. From this we can see that the food and drinks are not problems in Fujian, however the variety of choices for special diets are limited. In order to accommodate equally people with different kind of needs, it is necessary to have a bigger variety of restaurants or more options in menus. Safety has been rated the highest, which is very good but the language barrier has been rated lowest and it needs to improve.



**Fig. 7** Satisfaction rate of tourism factors

*Source: Authors' calculations*

## CONCLUSION

Clearly the image of Fujian province from foreign tourists' perspective has a lot of space to improve but still overall it can be said that the image is positive. According to current situation, we are forced to reflect on how foreign tourists are behaving while traveling in Fujian province and what the main obstacles they face are.

In the case of Fujian province, according to the results collected in this research, foreign tourists come to Fujian from all over the world and most of them were visiting Fujian for holidays. Even though the promotional campaigns of Fujian province in other countries are not considered that good, most of the respondents expressed that Fujian province is an attractive destination to them and they were pretty happy with the quality of the services in Fujian. Moreover, it has been discovered that the main reason for choosing Fujian province as their destination are the natural resources this province in China has. This research has included foreign travelers who have spent different amount of time in Fujian but most of them express that one of the main problems they face is language barrier. There is only a small amount of travelers who did not note to have faced language barrier, so it is presumed that these respondents have some Chinese language knowledge or are with someone with the knowledge of Chinese. In order to attract more foreign tourists and better accommodate the current ones employees in tourism related businesses should improve their English skills and also road signs, maps, menus should have an option in English, in this way all of the possible language barrier problems can be avoided. This can help Fujian province but also other regions in China improve their foreign tourists flow.

Food can also be a very big problem for some tourists with special diets for example for people with a vegetarian diet, halal diet, kosher diet or if they are allergic to some foods, this should also be a focus when thinking of attracting more foreign tourists. Because of health, religion, allergies some people are not allowed to eat certain foods so there should be more restaurants which offer these kinds of special meals. In a current situation most of the tourists with special diets are avoiding eating out because there are not enough places for these kinds of meals. Since food and also drinks are one of the most important factors of tourism industry, it is necessary to try to accommodate the needs of all the tourists.

In the case of Fujian province, according to the results that have been obtained, there are products that should be a certain option in tourism offer of Fujian province, as they might help reverse any negative perceptions associated with conjectural factors. The example shown here, which associate the image of Fujian to tea, emerges as a positive message for Fujianese tourism, highlighting recent efforts in the international promotion and distribution of this product.

This conclusion leads us to another reflection on the value chain of tourism and the impact it may have on the destinations' image and development. Because tourism is a sector with a bidirectional character – highly dependent on other sectors of the economy, while contributing to the growth of these – it is desirable that the definition of tourism policies and its implementation is aligned with all stakeholders, especially those who may be part of the tourist experience in a perspective of competitive differentiation. The synergies of a joint tourism strategy among key stakeholders of the tourism industry, contribute to maintain a strong image, allowing for the creation of an experience that exceeds the expectations of visitors and stimulates the desire for new visits, while



clarifying positioning issues, which are the most difficult to resolve in the development of destination tourism strategies.

#### LIMITATIONS AND POSSIBLE FUTURE RESEARCH

One of the limitations of this research is that data has not been monitored in a longer period of time so we cannot compare results as in longitudinal study. In order to improve that, it would be good to include that into the future research so the changes over time can be monitored. In this way we can follow the flow of foreign tourists in Fujian province and also collect the data about their satisfaction. Also one of the limitations of this research is that most of the respondents, we can say almost all of them have visited Fujian province at least for some time but it would be also interesting and useful to see how people who have not visited Fujian perceive it. This is also a future direction for this research, to spread the spectrum of respondents in order to get a fuller picture of how all internationals see Fujian and how that image can be improved. Tourists being informed about the destination before and after coming are one of the very important market components. So it necessary to cover all the bases, which means to be informed in detail of how both tourists who have and who have not visited a destination think (Stanciulescu, 2008). All of this tourism market research is done with the purpose of finding out what tourists think so things can improve, this paper only scratched the surface on what the problems of foreigners traveling in Fujian are but solutions to these problems can be an important piece of puzzle for future work.

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## MARKETINŠKI IDENTITET PROVINCIJE FUĐEN KAO TURISTIČKE DESTINACIJE – KROZ PERSPEKTIVU STRANACA

*Uticaj marketinškog identiteta destinacije na ponašanje turista je bilo tema mnogih istraživanja. Cilj ovog članka je identifikacija marketinškog identiteta Fuđen provincije kao turističke destinacije na međunarodnim tržištima, kao potpora za nalaženje rešenja kako poboljšati turističko iskustvo za strane turisti. Kao osnova analize uzimaju se rezultati ankete u elektronskom obliku dobijenim od stranaca koji su posetili ili živeli u provinciji Fuđen, kao i intervjui. Sveukupan marketinški identitet provincije Fuđen je pozitivan, gde je 50,5% ispitanika odgovorilo da je glavni razlog posete Fuđen provincije odmor, 20% ispitanika je koristilo turističku agenciju za planiranje puta, 32% je provelo u provinciji Fuđen više od šest meseci i „priroda“ je navedena kao glavni atribut destinacije koji može koristiti u međunarodnoj promociji. Rezultati mogu ukazivati na potrebu za uvođenjem novih elemenata u marketinšku strategiju. Međunarodno turističko tržište prepoznaje i ceniti ovu destinaciju. Prikazana razmišljanja mogu biti od velike koristi za donošenje odluka o unapređenju međunarodnog turizma. Ovaj članak analizira kako strani turisti doživljavaju provinciju Fuđen, što do sada nije bilo urađeno, a to je prvi korak u poboljšanju međunarodnog marketinškog identiteta provincije Fuđen koji će biti od pomoći u privlačenju turista iz inostranstva.*

*Ključne reči: provincija Fuđen, marketinški identitet, trendovi ponašanja potrošača, promotivne kampanje*

## A TIME SERIES ANALYSIS OF FOUR MAJOR CRYPTOCURRENCIES

UDC 336.74:004.738.5

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**Abstract.** *Because of an increasing interest in cryptocurrency investments, there is a need to quantify their variation over time. Therefore, in this paper we try to answer a few important questions related to a time series of cryptocurrencies. According to our goals and due to market capitalization, here we discuss the daily market price data of four major cryptocurrencies: Bitcoin (BTC), Ethereum (ETH), Ripple (XRP) and Litecoin (LTC). In the first phase, we characterize the daily returns of exchange rates versus the U.S. Dollar by assessing the main statistical properties of them. In many ways, the interpretation of these results could be a crucial point in the investment decision making process. In the following phase, we apply an autocorrelation function in order to find repeating patterns or a random walk of daily returns. Also, the lack of literature on the comparison of cryptocurrency price movements refers to the correlation analysis between the aforementioned data series. These findings are an appropriate base for portfolio management. Finally, the paper conducts an analysis of volatility using dynamic volatility models such as GARCH, GJR and EGARCH. The results confirm that volatility is persistent over time and the asymmetry of volatility is small for daily returns.*

**Key words:** *cryptocurrencies, time series, volatility*

**JEL Classification:** C58, G15

### 1. INTRODUCTION

Since the beginning of the web and introduction of electronic payment systems, there have existed ideas of avoiding transaction costs and payment uncertainties on the Internet. This was mainly a theoretical concept until an electronic payment system based on

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cryptographic proof was introduced. The system allowed any two willing parties to transact openly with each other without the necessity to introduce a trusted third party (Nakamoto, 2008). In such a manner, Bitcoin was first proposed as a cryptocurrency at the beginning of 2009, and lately, its block chain system for maintaining a decentralized system has been widely recognized as a new distributed platform for financial institutions. As a cryptocurrency, Bitcoin utilizes special encryption to generate money. Since 2009, numerous cryptocurrencies have been established together with several systems for maintenance and transaction recordings. Such systems are mainly based on distributed ledger technology (Pinna & Ruttenberg 2016). Most of the cryptocurrencies rely on decentralized concept of transactions which is supported by cryptocurrency miners. Moreover, these transactions are also anonymous which resulted in huge legislation challenges. Recently, some cryptocurrencies rely on distributed ledger technology while at the same time they have a centralized token system. Differences and challenges between decentralized and centralized cryptocurrencies are usually called K-Y paradox (Hegadekatti 2017)

According to CoinMarketCap (CoinMarketCap, 2018), at the moment there are 914 cryptocurrencies in the market. The combined market capitalization of all cryptocurrencies is approximately \$371 billion, where the top 5 currencies represent over 83% of the market. Our analysis will cover four of the five top currencies in the market.

Many of cryptocurrency price properties have attracted attention. Recently, a few research papers have found some similarities between usual financial time series and time series of major cryptocurrencies (Takaishi, 2017, Chan et al., 2017 and Catania et al., 2018). Similar to equity prices, cryptocurrencies reveal time varying volatility, heavy tails and an asymmetric reaction of the volatility process to the sign of past observations.

There has been a large amount of research done about Bitcoin, as it is the most popular cryptocurrency, while other important cryptocurrencies are still neglected. Due to the similar walk of time series of other cryptocurrencies, some advanced knowledge on Bitcoin price movements could be used in analysis of other observed currencies. Hence, in this paper we briefly consider some of the most important results in popular studies. Using weekly data of Bitcoin prices, Briere et al. (2015) examine diversified investment portfolios and discover that Bitcoin is extremely volatile and demonstrates high mean returns. Kristoufek (2015) found short and long links between Bitcoin and influencing factors. Correspondingly, in the same study, Bitcoin exhibits the properties of both standard financial assets and speculative assets. Cheah and Fry (2015) confirm that the Bitcoin market is highly speculative, and more volatile and susceptible to speculative bubbles than other currencies. Therefore, an examination of its volatility is crucial for investors. If we look at the aspect of volatility of cryptocurrencies, Barivieara et al. (2017) notice that the existence of long memory and persistent volatility explains the application of GARCH-type models. Moreover, an adequate usage of the GARCH model specification suggests the significance of having both a short and long-run element of conditional variance (Katsiampa, 2017). Many extensions of GARCH have been carried out to effectively estimate Bitcoin price dynamics (Dyhrberg, 2016, Bouri et al., 2017). The asymmetry in the Bitcoin market is still significant, suggesting that Bitcoin prices were driven more by negative than positive shocks (Bouoiyour and Selmi, 2016). It suggests that the Bitcoin market is still far from being mature.

Considering previous studies, we attempt to offer some basic stylized facts about major cryptocurrency movements and potential linkages among them. Our research presented in the following paper encompasses four sections. After an adequate introduction, explanations and a literature review, we continue with the second section where we offer some basic statistical properties of the four cryptocurrencies. The third section explains the volatility dynamics of a cryptocurrency's daily returns and introduces three GARCH type models. Finally, we conclude the paper with some remarks and recommendations.

## 2. DATA AND ITS STATISTICAL PROPERTIES

In view of our goal, in this paper we look at the daily market price data of four major cryptocurrencies: Bitcoin (BTC), Ethereum (ETH), Ripple (XRP) and Litecoin (LTC). For the analysis, we selected to use daily market data taken from August 6th, 2015 to March 11th, 2018, or exactly 948 daily observations. A start date was chosen based on the trading release date of Ethereum cryptocurrency. Other mentioned cryptocurrencies were released earlier (Bitcoin in 2009, Litecoin in 2011 and Ripple in 2013).

Table 1 contains summary statistics of daily logarithmic or continuously compounded returns of the exchange rates of four cryptocurrencies. The assumption is that the data are independent and identically distributed, have no serial correlation and have no heteroskedasticity.

**Table 1** Summary statistics

Statistics	BTC	ETH	XRP	LTC
Mean	0.0037	0.0067	0.0049	0.0040
Median	0.0032	0.0000	-0.0015	0.0000
Maximum	0.2276	0.3830	1.0280	0.5516
Minimum	-0.1892	-0.3101	-0.6530	-0.3125
Std. Dev.	0.0409	0.0776	0.0976	0.0598
Skewness	-0.2046	0.2243	1.8397	1.9040
Kurtosis	7.3981	6.4764	23.0633	18.4828
Jarque-Bera	769.85	484.82	16417.56	10030.9
Probability	0.0000	0.0000	0.0000	0.0000
$\rho(1)$	0.0050	-0.0518	-0.2066	0.0231
$\rho(2)$	-0.0064	-0.0124	0.0732	-0.0368
$\rho(3)$	0.0085	0.0942	0.1055	0.0269
$\rho(4)$	-0.0494	-0.0689	-0.0588	0.0225
ADF	-30.5688	-34.5773	-16.1419	-30.0424
PP	-30.5683	-34.6049	-37.0895	-30.0842
ARCH(4)	17.3163	19.0455	16.8507	10.1807

*Source: authors' research*

The results in Table 1 emphasize positive expected daily returns in case of all four observed cryptocurrencies. Minimum and maximum refers to the presence of extreme observations in the sample period (i.e. heavy tails of distribution). The standard deviation shows better relative stability of exchange rates in the case of Bitcoin than for the other

cryptocurrencies. The findings related to normal distribution assumptions demonstrate strongly the leptokurtic feature of the data series with some signs of skewness. Bitcoin poses negative, while other cryptocurrencies show positive skewness. The generally accepted financial theory assumes that rational investors prefer positive asymmetry where big losses are less likely to appear. The argument to invest with positive skewness lies in the fact that median is more than mean. Hence, there is a better chance to yield a profit. On the other hand, negative skewness attracts investors who are ready to risk and adopt the rules of active investment management. Some interesting research on stock price skewness proves that negative asymmetry is more likely to happen to stocks with increase in trading volume, positive returns in last 36 months and bigger share in market capitalization (Chen et al., 2001). Expectedly, the Jarque-Berra statistics in all four cases refer to the hypothesis that reject the existence of normal distribution of returns of exchange rates. Serial correlation or autocorrelation  $\rho(i)$ , estimated at lag  $i$  for each data series, are usually small. Such results provide long term surplus profits as opposed to short term profits that do not automatically perform any possible trends in returns of cryptocurrency's exchange rates (Radovanov, Marcikić, 2017). Additionally, the results of Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) unit-root test show rejection of the null hypothesis of a unit root for the returns and accept the presence of stationarity in data series of returns. Table 1 contains the results of ARCH LM test for autoregressive conditional heteroskedasticity in the residuals with four lagged residuals in the model. The values of ARCH (4) confirm that there exist ARCH effects in the returns of cryptocurrencies, suggesting that the model for the conditional mean needs to be expanded with autoregressive conditional heteroskedasticity model for the conditional variance (Katsiampa, 2017). Considering all previous facts and findings, particularly serial correlation and ARCH LM test, the log returns of the exchange rates of observed four cryptocurrencies are approximately independent and identically distributed, have no serial correlation and have heteroskedasticity.

**Table 2** Correlation matrix

	BTC	ETH	LTC	XRP
BTC	1.0000	0.9145	0.9582	0.8292
ETH	0.9145	1.0000	0.9320	0.9061
LTC	0.9582	0.9320	1.0000	0.8752
XRP	0.8292	0.9061	0.8752	1.0000

*Source: authors' research*

Table 2 represents the correlation matrix of returns of cryptocurrency's exchange rates. The intersection of a row and column in Table 2 shows the results of the correlation coefficient between two cryptocurrencies. Due to the level of correlation which is positive and closer to 1, we noticed similarities in movements of returns in the case of all four cryptocurrencies. Nevertheless, a risk diversified investment portfolio does not include assets with high positive correlation. Theoretically, that cannot reduce portfolio risk. What additionally substantiates the fact of a bad choice to have a portfolio with two or more mentioned cryptocurrencies, is the analysis of cross-correlations within the same data set. The results show a high degree of correlation within +/- 12 lags (days). Table 3

presents the cross-correlation coefficient between BTC and ETH. Cross-correlation results indicate the level of similarities between two time series in different moments of time. Therefore, correlation changes over time will not improve portfolio risk diversification by including two or more cryptocurrencies.

**Table 3** Cross-correlations between BTC and ETH

i	BTC,ETH(-i)	BTC,ETH(+i)
1	0.9053	0.9162
2	0.8968	0.9181
3	0.8883	0.9193
4	0.8795	0.9203
5	0.8713	0.9214
6	0.8627	0.9214
7	0.8533	0.9208
8	0.8444	0.9193
9	0.8359	0.9172
10	0.8287	0.9155
11	0.8217	0.9142
12	0.8148	0.9134

*Source: authors' research*

### 3. VOLATILITY OF CRYPTOCURRENCIES

Due to the dynamic nature of returns of cryptocurrencies, the GARCH-type models will be applied in this paper. Besides standard GARCH(1,1), we will present a volatility analysis by using GJRGARCH and EGARCH concerning asymmetry in volatility of returns.

Standard GARCH(1,1) (Bollerslev, 1986) contains a conditional variance equation as follows:

$$\sigma_t^2 = \omega + \alpha e_{t-1}^2 + \beta \sigma_{t-1}^2 \quad (1)$$

Where  $\sigma_t^2$  denotes time-depending variance,  $e_{t-1}^2$  is lagged error term and  $\omega > 0$ ,  $\alpha > 0$  and  $\beta > 0$ .

The GJRGARCH(1,1) (Glosten et al., 1993) model has the following conditional variance equation:

$$\sigma_t^2 = \omega + \alpha e_{t-1}^2 + \beta \sigma_{t-1}^2 + \gamma e_{t-1}^2 I_{t-1} \quad (2)$$

Where  $I_{t-1} = 1$  if  $e_{t-1} \leq 0$  and  $I_{t-1} = 0$  if  $e_{t-1} > 0$ .

The exponential GARCH model (Nelson, 1991) denoted by EGARCH(1,1) has a conditional variance equation as follows:

$$\ln \sigma_t^2 = \omega + \alpha \left| \frac{e_{t-1}}{\sqrt{\sigma_{t-1}^2}} \right| + \delta \left( \frac{e_{t-1}}{\sqrt{\sigma_{t-1}^2}} \right) + \beta \ln \sigma_{t-1}^2 \quad (3)$$

In all three types of GARCH models, we used the univariate AR(1) model for conditional mean equation. Table 4 presents the estimated results of the aforementioned GARCH models in the case of four cryptocurrencies.

**Table 4** Estimation results of GARCH models

Crypto-currency	Bitcoin			Ethereum		
Model	AR-GARCH	AR-GJR	AR-EGARCH	AR-GARCH	AR-GJR	AR-EGARCH
c	0.0029***	0.0032***	0.0029***	0.0032**	0.0033**	0.0032**
AR(1)	-0.0173*	-0.0206*	-0.0478*	-0.0179*	-0.0180*	-0.0491*
$\omega$	0.0000***	0.0000***	-0.6458***	0.0002***	0.0002***	-0.8019***
$\alpha$	0.1862***	0.2471***	0.0257***	0.2797***	0.2617***	0.0641***
$\beta$	0.8036***	0.7082***	0.9472***	0.7124***	0.7129***	0.9136***
$\gamma$	-	-0.0491*	-	-	-0.0056	-
$\delta$	-	-	-0.0009	-	-	0.0211
Crypto-currency	Ripple			Litecoin		
Model	AR-GARCH	AR-GJR	AR-EGARCH	AR-GARCH	AR-GJR	AR-EGARCH
c	-0.0036*	-0.0020*	-0.0028*	0.0014	0.0014	0.0022**
AR(1)	-0.1664***	-0.1667***	-0.1956***	0.0297	0.0022	0.0088
$\omega$	0.0008***	0.0008***	-1.0038***	0.0001***	0.0001***	-0.2831***
$\alpha$	0.4504***	0.4264***	0.1265***	0.0909***	0.1070***	0.0426***
$\beta$	0.5455***	0.5362***	0.8662***	0.9007***	0.8818***	0.9471***
$\gamma$	-	-0.2943***	-	-	-0.1067***	-
$\delta$	-	-	0.1056***	-	-	0.0924***

*Source: authors' research*

Note: In Table 4 \* represents the significance at the 10% level, \*\* represents the significance at the 5% level, while \*\*\* denotes the significance at the 1% level.

In the first two rows of each model, Table 4 presents the results of conditional mean equation estimated parameters, while the other five rows are reserved for conditional variance estimated parameters. In each estimated model,  $\alpha + \beta$  is close to 1 and it indicates the persistency of volatility over time. Mostly, the larger values of  $\beta$  parameters mean that large changes in the volatility will affect future volatilities for a long period of time. However, we cannot neglect the significance of ARCH effects estimated in parameter  $\alpha$ . In GJR and EGARCH models the asymmetry of positive and negative innovations on the volatility has been involved. In the case of BTC and ETH, there is no significance in estimated parameters  $\gamma$  and  $\delta$ , thus the effects on sign are inconsiderable. In other words, the results demonstrate a small level of volatility asymmetry for daily returns. On the other hand, asymmetry parameters in the case of XRP and LTC reveal the existence of positive asymmetry where good news increases the volatility more than bad news of the same size, which is totally different than the cases of other financial time series.



#### 4. CONCLUSIONS

The cryptocurrency market has lately seen huge growth. Due to the increasing demand and interest in cryptocurrencies, Chu et al. (2017) believe that they should not be treated as more than just a novelty. The same authors are looking at cryptocurrencies in terms of financial assets, where most market participants trade them for investment purposes. However, as cryptocurrencies are both decentralized and mainly unregulated they will never behave precisely like other currencies on the market. Nevertheless, their current position on the market is somewhere between classical commodities and currency because of their decentralized nature and limited market size.

The answer about the future of cryptocurrencies lies in resolving legislation challenges since open block chains are currently not ready for usage in traditional economies. Governments and corporations worldwide already observed that they can benefit from block chain technology, and a lot of research is being conducted in order to enable block chain systems for regulated global usage. For the central bank of a country, a centralized cryptocurrency can be considered as a retail e-currency for the whole country. Finally, it can lead to a legal framework for the whole unregulated tokenized crypto exchanges, because it is much easier to organize and regulate taxation and accounting for the centralized cryptocurrency.

Examining the statistical properties and the volatility of cryptocurrencies would be mainly valuable in terms of portfolio management, risk analysis and market sentiment analysis. The results shown in this paper prove to substantially support the investment decision making process. Highlighting the importance of active investment management, the volatility modelling process demonstrates the equal importance of the short and long-run components of conditional variance. Additionally, cryptocurrencies can be used as a tool for risk-averse investors in anticipation of bad news.

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## ANALIZA VREMENSKIH SERIJA ČETIRI GLAVNE KRYPTOVALUTE

*Kako raste interes ka investiranju u kriptovalute, jasno je da postoji potreba da se kvantifikuju njihove varijacije kroz vreme. Zbog toga u ovom radu mi pokušavamo da odgovorimo na nekoliko važnih pitanja koja se odnose na vremenske serije kriptovaluta. Spram naših ciljeva i tržišne kapitalizacije, analiziramo dnevne cene četiri glavne kriptovalute: Bitcoin (BTC), Eterijum (ETH), Ripl (XRP) i Lajtkoin (LTC). U prvom delu opisujemo dnevne stope prinosa u odnosu na kurs američkog dolara posmatrajući osnovne statističke pokazatelje. Interpretacija ovih rezultata u mnogome može biti glavna smernica tokom procesa odlučivanja o ulaganju. U sledećoj fazi primenjujemo autokorelaciju sa ciljem da utvrdimo ponavljajuće obrasce ili slučajno kretanje dnevnih povrata. Sem toga, nedostatak literature koji se bavi upoređivanjem kretanja cena kriptovaluta upućuje na analizu korelacije između navedenih vremenskih serija. Zaključci ovakve analize su osnova portfolio menadžmenta. Na kraju, urađena je analiza volatilnosti koristeći GARCH, GJR i EGARCH, kao modele za dinamičnu volatilnost. Rezultati potvrđuju da je volatilnost perzistentna tokom vremena, a da je asimetričnost volatilnosti mala kada se posmatraju dnevni prinosi.*

Ključne reči: *kriptovalute, vremenske serije, volatilnost*

## **THE INTERDEPENDENCE BETWEEN ENVIRONMENTAL AND SOCIAL PERFORMANCES AND COMPANY'S ECONOMIC VALUE: THE CASE STUDY OF TITAN CEMENT KOSJERIĆ**

*UDC 502/504:65.015.25*

*005.35*

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**Abstract.** *The purpose of this paper is to research the relationship between environmental and social performances and company's economic value in case of the Titan Cement Kosjerić, and contribute to a clearer understanding of the importance of integrating the sustainable development principles into the business strategy and processes. The research was conducted using the data on selected financial and nonfinancial performances of the Company from the Reports on corporate social responsibility and sustainable development for the period from 2011 to 2015. To confirm the initial hypothesis, the method of analysis, method of synthesis, and the correlation analysis method were used. The empirical findings of this research indicate that there is a high degree of interdependence between environmental and social performance and Company's economic value, which is in line with the Company's commitment to sustainable development and socially responsible business. The main contribution of this paper is in highlighting the importance of carrying out the socially responsible practices in the cement industry companies for improving all aspects of sustainable business - financial, environmental, and social.*

**Key words:** *sustainable development, environmental and social performances, company's economic value, Titan Cement Kosjerić*

**JEL Classification:** F21, Q01, Q50, Q53

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## I. INTRODUCTION

Contemporary technological development with intensive use of the environment as a source of inputs for the production process, direct recipients of negative production externals and space through which the distribution, use and disposal of manufactured products is made, has called into question the existence prerequisites for maintaining a healthy environment and limited the possibilities for sustainable development (adapted according: Hemmelskamp & Leone, 2001). Furthermore, “climate changes and more frequent environmental degradation have influenced human awareness that their life and business style can seriously affect the quality of the environment” (Perović & Radukić, 2017, p. 747), and that “the biological existence of a human depends on healthy environment, so the existence of the ever-lasting tendency for his survival is quite clear” (Magdalinović Kalinović & Radukić, p. 428).

The impact of economic sectors on the state of the environment is uneven in time and in terms of intensity. One of the main pollution sources and generation of significant waste quantities is the industry sector. “However, all industrial branches do not have the same impact on the natural environment. This influence depends on the applied technique and technology characteristics, the type and origin of the obtained or processed raw materials in the technological processes of production” (Gligorijević & Bošković, 2013, p. 350). Generally speaking, the industry sector environmental impact is reflected in the exhaustion of natural non-renewable resources, high energy consumption, soil, water and air pollution, climate change and global warming, acid rain and generating large quantities of harmful waste. However, “the role of industry and business in general in the achievement of sustainable development is beyond doubt, as demonstrated by emerging concepts such as responsible entrepreneurship and eco-efficiency and the capacity of enterprises to face new challenges such as globalization, the information society and the change of production and consumption patterns” (European Commission, 1999, p. 5).

The cement industry today distinguished itself as one environmentally sensitive industrial branch for several reasons.

First, cement production requires the consumption of a huge quantity of resources and energy. The cement industry is highly energy-intensive, since around 90% of the energy needed for cement production consists of thermal energy generated by direct fuel combustion in cement kilns.

Second, with the rise of the world’s population, demand for energy and construction materials is constantly increasing, which has an impact on the increase in greenhouse gas emissions. The cement industry participates with around 5% in the total broadcasted quantity at the global level.

Third and associated with the previous, increased global warming caused by carbon dioxide (CO<sub>2</sub>) emissions causes climate change with multiple negative economic, environmental and social impacts globally.

Besides the introductory considerations, this paper consists of the following parts: In the second part of the paper the attention is devoted to the importance of integration, environmental and social components in the company’s management system, with particular focus on sustainable development concept application in the cement industry. The third part of the paper provides an insight into the research methodology and initial research hypothesis. The research results and their discussion are given in the fourth part of the paper. Finally, concluding observations are made in the last part of the paper.

## 2. RESEARCH CONTEXT

### 2.1. Integration of environmental and social components into the company's management system

The concept of sustainable development is presented with a model of three pillars that consist of economic, environmental and social. The economic pillar indicates the need to ensure the well-being of people through the efficient use of natural resources. The social pillar of sustainable development is a requirement for social services to be more accessible to people, including several different dimensions: provision of educational services, access to health services, the provision of acceptable living standards and employment, and so on. The environmental pillar of sustainable development implies conservation and preservation of the physical and biological bases of the ecosystem (adapted according to: Jovanović et al., 2011, p. 49-50).

Environmental exposure	
Type of environmental intervention	Activities specific to the enterprise
Emissions (in air, water and land)	...
Waste	...
Material inputs / material intensity	...
Energy intensity	...
Noise and vibration	...
Thermal energy loss	...
Radiation	...
Direct interventions in nature	...

**Fig. 1** A framework for identifying the environmental exposure of companies

*Source: Figge, F., Hahn, T., Schaltegger, S. & Wagner, M. (2002). The sustainability balanced scorecard – Linking sustainability management to business strategy. Business Strategy and the Environment, 11(5), 269-284, p. 277.*

Identification of exposure to the environmental and social dimension, both at the level of the business unit and at the company level, is a necessary step in defining the management system for long-term business strategy management. As a result of these efforts, the profile of environmental and social exposure is identified, for the purpose of identifying all relevant environmental and social aspects. There are two frameworks that are used to identify the degree of environmental and social exposure of companies. The first framework represents the company's environmental exposure, and the main idea is to display environmental interventions that arise from company-specific operations. The environmental exposure is shown in Figure 1.

Strategically relevant social aspects can be identified in line with environmental aspects. However, given the large number of differences in social aspects and the lack of foundation in natural sciences, it is difficult to achieve their comprehensive classification. It is important to note that the social aspect mostly depends on the preferences and values of the different subjects who act on the business scene. It is recommended that the classification of social factors is carried out by the actors involved, not by their content.

The stakeholder approach provides a quality and useful basis for the classification of actors of different social requirements. Figure 2 shows a classification according to the previous criteria.

The social aspect can be identified systematically, following a comprehensive framework of potentially relevant stakeholder groups. These stakeholders can be divided into: internal stakeholders, stakeholders from the value chain, stakeholders from the local community and social stakeholders. Stakeholders can be classified into two groups - direct and indirect. The direct group includes stakeholders who connect with a company through direct exchange of material resources, while with indirect stakeholders there is no such type of exchange. In the first step, all relevant stakeholder groups need to be identified. It is then necessary to determine the social requirements and issues raised by those groups.

Social exposure							
Direct stakeholders				Indirect stakeholders			
Internal	From the value chain	From the local community	Social	Internal	From the value chain	From the local community	Social
Special groups of stakehold.	Special groups of stakehold.	Special groups of stakehold.	Special groups of stakehold.	Special groups of stakehold.	Special groups of stakehold.	Special groups of stakehold.	Special groups of stakehold.
...	...	...	...	...	...	...	...
requests / questions	requests / questions	requests / questions	requests / questions	requests / questions	requests / questions	requests / questions	requests / questions
...	...	...	...	...	...	...	...

**Fig. 2** A framework for identifying the social exposure of companies

*Source: Figge, F., Hahn, T., Schaltegger, S. & Wagner, M. (2002). The sustainability balanced scorecard – Linking sustainability management to business strategy. Business Strategy and the Environment, 11(5), 269-284, p. 278.*

Determining strategical relevant aspects is a key step both in the classical and in the new, expanded concept of the control system. The basic purpose of such step is to translate a formulated strategy into cause-and-effect related goals and indicators. It is necessary to repeat Kaplan and Norton's (1992) recommends that the process of identifying strategically relevant aspects is realized on the top-down principle, i.e. that all major initiatives, proposals and solutions go from top management. Of course, the same approach, which is valid in the traditional concept, can also be applied to the sustainable development management system. The only difference is that, in addition to standard perspectives, environmental and social considerations are taken into account. It should be noted that the hierarchical and causal link is guaranteed so that it will serve to unify all strategically important aspects in the direction of the successful conversion of the strategy and its direction towards long-term development.

There are three levels of the environmental and social component strategic relevance in the literature and they are presented in the following way (Figge et al., 2002, p. 279):

1) Environmental and social components can be strategic key items for which the so called, consequential indicators must be identified. Their basic role is to measure whether strategic and substantive requirements are achieved in perspective.

2) Key performance measures, presented by leading indicators, show how to achieve results in each perspective, which are reflected in subsequent indicators. Leading indicators have a high level of business specificity and will reflect environmental and social aspects in every situation in which they act as key performance benchmarks.

3) Environmental and social aspects can also be represented by the so-called, clean (hygienic) factors that can best be seen through diagnostic indicators. Clean factors are items that need to be managed sufficiently to ensure the successful execution of business operations, but the inclusion of these factors does not contribute to any comparative advantage. Simply, hygienic factors represent a necessary but not sufficient condition for successful implementation of the company strategy. For this reason, these factors are not included in the BSC concept.

	Environmental exposure								Social exposure							
									Direct stakeholders				Indirect stakeholders			
	Emissions	Waste	Material Inputs	Energy Intensity	Noise	Thermal Energy Loss	Radiation	Direct Interventions	Value Chain	Local Community	Social	Internal	Value Chain	Local Community	Social	Social
Strategic essential items																
Key performance indicators																

**Fig. 3** Matrix for determining the strategic relevance of the environmental and social component

Source: Figge, F., Hahn, T., Schaltegger, S. & Wagner, M. (2002). *The sustainability balanced scorecard – Linking sustainability management to business strategy. Business Strategy and the Environment, 11(5), 269-284, p. 279.*

It is necessary to emphasize the strategic importance of the environmental and social component and to determine whether they represent strategic key items, key performance metrics or pure factors. For this reason, a matrix that will interconnect one with another, environmental and social exposure, and on the other hand, the category of leading and consequential indicators is shown in Figure 3.

## 2.2. Application of the sustainable development concept in the cement industry

Many companies operating in the cement industry are today faced with numerous challenges in all three sustainable development dimensions. Within the economic dimension, the key issue is to ensure the financial prosperity of the company and all its stakeholders, since creating enterprise value for cement companies is linked to their ability to address external stakeholder issues. Within the social dimension, they are faced with problems related to the cement production impact on human well-being and satisfying the employees' needs and the society as a whole. Problems in the domain of environmental dimensions require the use of ex-ante and ex-post activities in order to ensure the overall environmental favorable business of the company. These include addressing issues related to resource extraction and their impact on environmental quality; using non-renewable resources; quarrying, cement production, dust transport emissions; the air emissions (such as emissions of NO<sub>x</sub>, SO<sub>2</sub>, CO, etc.), and also CO<sub>2</sub> emissions that cause global climate change.

Companies operating in this environmentally sensitive industry have found that in order to remain competitive they must combine sound financial performance with an environmental responsibility commitment, and open and honest interaction with stakeholders (World Business Council for Sustainable Development, 2002). They today bear great responsibility for achieving sustainable development, applying such policies that contribute to the achievement of continuous economic growth without causing damage to the environment and exploitation of the workforce by respecting key labor standards. The key factors that contributed to the increase of the cement companies' environmental responsibility include:

- The need to increase resource efficiency, reduce operating costs through waste reduction, recycling and secondary use of waste.
- The pressure of key stakeholders towards greening the business.
- Customers' demands and needs in terms of using environmentally preferable cement plant products.
- Local communities' environmental concerns in terms of cement production externalities.
- Stronger environmental regulations of the host country and home country governments.
- Innovations towards introducing new environmental technologies and production processes.
- Increasing demand for global accountability and transparency of company's activities.

In addition to the aforementioned so-called push factors there are also certain limiting factors that hinder the efforts of cement companies to implement the sustainable development concept. These include the following:

- Inability to change product characteristics or manufacturing process.
- High resource and capital intensity that limits the ability for faster changes in the production process.
- Product standards designed to provide safety and integrity of built structures limit product innovation.
- Market demand in the direction of use and higher strength cement lead to faster resource depletion.
- Relatively uniform price of cement industry products across companies makes it difficult to take investments in sustainable business practices.



In April 2002, the cement factory in Kosjerić became a part of Titan Group, a renowned cement and building materials producer that operates in 36 countries, employs approximately 5.500 workers worldwide and has a business tradition longer than 11 decades (adapted according: Titan Group, 2018). The acquisition of a factory by one of the largest construction material manufacturers in the world has opened a new chapter in the social business responsibility and cement factory development for several reasons.

First, the Titan Group since the establishment and commissioning of the first cement plant in Greece in 1902 follows the principles of corporate social responsibility. The social dimension of business was confirmed already in 1922 when the Company insured employees in the event of an injury at work, providing numerous benefits to employees and assisting the vulnerable population in situations of natural disasters and during the Second World War. The Company implemented its first environmental activities by introducing the first electrostatic filter at the plant in Greece in 1960. The Company's commitment to the implementation of corporate social responsibility is confirmed by the fact that as a leader in this field and in order to ensure transparency of its activities, it published the first Annual Social Report, entitled Social Balance, in 1983.

Second, Titan Cement Kosjerić is a good example of a company that is - due to the efforts to the achievement of sustainable development principles - gaining a reputation of an environmentally and socially responsible company. The philosophy of sustainable development is a permanent commitment of the Company, and long-term results of this commitment are reflected through investments in manufacturing technology, the implementation of various projects in the fields of environment, education, health and safety at work, the local community and its immediate surroundings (adapted according: Titan Cementara Kosjerić, 2018a).

Third, the corporate social responsibility policy adopted in 2010 determines corporate social responsibility in line with the corporate vision. Also, in order to increase the transparency of activities and to maintain the reputation of an environmentally conscientious investor, in 2011 Titan Cement Kosjerić issued its first annual report on corporate social responsibility and sustainable development.

Fourth, "commitment of Titan Group to corporate social responsibility and sustainable development is confirmed through business policies and practices and through active participation in international initiatives" (Titan Cementara Kosjerić, 2018b). As a first Greek signatory company to the UN Global Compact, Titan strives to ensure the human and labor rights protection, environmental protection, and to fight against bribery and corruption. Also, Titan is a member of CSR Europe, the WBCSD Initiative for sustainability in the cement industry and the European Alliance for CSR.

Fifth, Titan Cement Kosjerić is the first company in the Republic of Serbia, which submitted in March 2010 complete documentation for publishing the integrated permit to the Ministry of Environment and Spatial Planning. In line with the Law on integrated prevention and environmental pollution control, the company receives an integrated permit (IPPC) in June 2011.

Sixth, the Company undertakes proactive activities on identifying and managing risks and opportunities in order to track future business guidelines in a competitive and rapidly changing global market. Within the identified risks, climate change takes a special place. The Company's strategic reaction to climate change is reflected on steering the efforts to find the best available technologies, increasing the use of alternative raw materials and

fuel, and improving energy efficiency. Such strategic orientation is confirmed by adopting the Strategy for mitigating climate change in 2006, with which is harmonized business imperative, contained in the task that in the production process makes less bad, while ensuring that it makes more good.

### 3. RESEARCH METHODOLOGY AND HYPOTHESIS

The Titan Cement Kosjerić Company is committed to improving environmental performances, promoting socially responsible business towards the main challenges of the 21<sup>st</sup> century. The key activities with which the Company confirms concerns for future generations and maintains the reputation of an environmentally responsible company relates to reducing air emissions and impact on climate change, reducing water and fossil fuel consumption, conserving biodiversity, and managing waste. These target-oriented activities ensure the compatibility between the strategic business objectives and the sustainable development principles and contribute to company's operational efficiency. Titan Cement Kosjerić applies high business standards and adheres to valid regulations, which further confirms its responsible attitude towards the environment and serves as an example of best practice of responsible business for other companies.

The key institutional support for sustainable environmental management in the Company provides the environmental management system, which establishes, promotes and reviews the Company's contribution in this field. In addition, the Company's commitment to preserving natural resources can be identified by providing financial support in the implementation of research programs and improving the technological basis of production, as well as by raising the employees' awareness, as well as all relevant actors in the value chain.

In addition to the environmental dimension, an important dimension of the Company's sustainable business makes the Company's commitment to continuous improvement of the employees' quality by organizing various training programs and seminars, and learning through work. In particular, the Company contributes to the development and expansion of a security culture through theoretical education and practical operational training for the safe execution of all operations.

The quantification of the efforts that Titan Cement Kosjerić makes in the direction of improving the environmental and social performances is the subject of the research that is covered in this paper. The basic hypotheses from which the research begins are as follows:

H1: The Company's results are related to defined targets in reducing greenhouse gas emissions and packaging waste management by 2020.

H2: There is direct interdependence between the Company's economic value and the social performances.

In confirming the above laid hypotheses, the method of analysis, method of synthesis, and the correlation analysis method were used, that is, the specific calculation of nonparametric quantitative agreement indicators (Spearman's coefficient of correlation of ranks). Research is conducted using the data on selected financial and nonfinancial performances from the available Titan Cement Kosjerić Reports on corporate social responsibility and sustainable development for the period from 2011 to 2015 (see Table 1).

**Table 1** Selected financial and nonfinancial indicators of business performances, Titan Cement Kosjerić, 2011-2015

	2011	2012	2013	2014	2015
<b>Selected financial indicators</b>					
Total cement production	517,456	442,201	364,849	380,272	410,115
Net profit (after income taxes (000 €))	13,257	15,869	8,439	8,993	8,065
Increase of the company's economic value (000 €)	15,354	12,518	9,766	10,175	9,807
<b>Selected nonfinancial indicators</b>					
Natural raw materials consumption (t)	649,349	617,695.5	468,191.7	466,429	514,503.01
Secondary raw materials share in the consumption of materials	13.98%	9.8%	10.2%	15.2%	11.53
Total direct CO <sub>2</sub> emissions (kg/t <sub>product</sub> )	623	650	623	615	605
<b>Air emissions</b>					
Particulate matters total emissions (t)	1.8	1.55	1.05	1.08	1.14
NO <sub>x</sub> total emissions (t)	428	461.75	296.9	329.4	262.3
Recycled waste quantity (t)	-	83.74	166.58	417.4	163.16
No. of employees (end of year)	307	261	259	234	233
No. of training hours per employee	25.75	33.74	29.67	33.47	33.81

*Source: Titan Cementara Kosjerić (2011, 2012, 2013, 2014, 2015). Društveno odgovorno poslovanje i održivi razvoj [Corporate social responsibility and sustainable development], Retrieved from: [http://www.titan.rs/public/uploaded\\_files/Titan\\_CSR\\_Prikaz\\_SRP\\_web2.pdf](http://www.titan.rs/public/uploaded_files/Titan_CSR_Prikaz_SRP_web2.pdf); [http://www.titan.rs/public/uploaded\\_files/2012\\_Titan\\_CSR\\_Report\\_SRB.pdf](http://www.titan.rs/public/uploaded_files/2012_Titan_CSR_Report_SRB.pdf); [http://www.titan.rs/public/uploaded\\_files/TITAN\\_2013\\_SRP\\_web.pdf](http://www.titan.rs/public/uploaded_files/TITAN_2013_SRP_web.pdf); [http://www.titan.rs/public/uploaded\\_files/TITAN\\_DOPIzvestaj\\_2014\\_SRB\\_web.pdf](http://www.titan.rs/public/uploaded_files/TITAN_DOPIzvestaj_2014_SRB_web.pdf); [http://www.titan.rs/public/uploaded\\_files/TITAN\\_2015\\_Izvestaj\\_o\\_DOP\\_i\\_OR.pdf](http://www.titan.rs/public/uploaded_files/TITAN_2015_Izvestaj_o_DOP_i_OR.pdf), Accessed on: 15th April 2018.*

#### 4. RESEARCH RESULTS AND DISCUSSION

In dynamic and uncertain business conditions, Titan Cement Kosjerić implements its social responsibility policy, which, as one of the company's core values, lays out the way for business activities growth, but also contributes to improving the company's financial performances.

The coefficient of multiple correlations between the financial indicators is 0.792, which means that there is a high degree of direct relationship between these three variables. Partial correlation coefficients show that there is a strong inverse relationship between the cement production and the increase of the Company's economic value (Pallant, 2013; the relationship is strong if the coefficient of correlation is greater than 0.5), while between the cement production and net profit there exists a strong direct dependence (the coefficient is 0.6).

The strategic effort of the Company's management to conserve natural resources is reflected in the reduction of the natural raw materials consumption, as well in the increase in the alternative raw materials share in the total consumption of materials.

**Table 2** Correlation of financial indicators

			Cement production	Increase of the Company's economic value	Net profit
Spearman's rho	Cement production	Correlation Coefficient	1.000	-.600	.600
		Sig. (2-tailed)	.	.285	.285
		N	5	5	5
	Increase of the Company's economic value	Correlation Coefficient	<b>-.600</b>	1.000	-.800
		Sig. (2-tailed)	.285	.	.104
		N	5	5	5
	Net profit	Correlation Coefficient	.600	-.800	1.000
		Sig. (2-tailed)	.285	.104	.
		N	5	5	5

*Source: Authors' own presentation*

As can be seen from Table 3, between the natural raw materials consumption and the secondary raw materials share in the consumption of materials there exists a negligible inverse relationship (the coefficient is -0.30). In the periods of declining natural raw materials quantities, the secondary raw material share of total consumption increased, apropos, the Company's management intensively worked on their substitution. In particular, the increase of the secondary raw materials share in total consumption of materials in 2014 led to an increase in the selected financial indicators - cement production, increase of the Company's economic value and net profit.

**Table 3** Correlation between the natural raw materials consumption and the secondary raw materials share in the total consumption of materials

			Natural raw materials consumption	Secondary raw materials share in the consumption of materials
Spearman's rho	Natural raw materials consumption	Correlation Coefficient	1.000	-.300
		Sig. (2-tailed)	.	.624
		N	5	5
	Secondary raw materials share in the consumption of materials	Correlation Coefficient	-.300	1.000
		Sig. (2-tailed)	.624	.
		N	5	5

*Source: Authors' own presentation*

In addition to raw materials, thermal and electric energy make basic resources for the cement and construction industry, which are highly energy-intensive. Whereas those operations can have a far-reaching impact on climate change, Table 4 shows the correlation between the indicators of harmful gases emissions.

When the effect of the produced cement quantity by years is removed, the partial correlation coefficients between the indicators of the harmful gases emissions have shown the following:

1. There is a direct strong, almost perfect correlation (0.999) between the CO<sub>2</sub> emission and the particulate matters total emission, as well as between CO<sub>2</sub> emission and NO<sub>x</sub> total emission. Apropos, with the CO<sub>2</sub> emissions reduction, the particulate matters total emission also decreases; as well as with the CO<sub>2</sub> emission reduction reduces air emissions (NO<sub>x</sub>) produced during cement production also reduce. This directly confirms the internal emissions management system efficiency in the Company, through the adequate production processes management, the regular equipment maintenance, and the continuous emission levels monitoring on major broadcasters. In addition, the CO<sub>2</sub> emission and recycled waste quantity are indirectly related, whereby this connection is of extremely low intensity (-0.272).

2. There exists an almost perfect direct correlation (0.946) between the particulate matters total emission and NO<sub>x</sub> total emission. Apropos, in the whole observed period, air emissions are reduced.

3. There exists an inverse negligible relationship (-0.223) between the particulate matters total emission and the recycled waste quantity, which is logical since the recycled waste quantity is increasing from year to year and the particulate matters total emissions fall.

4. There is a negligible direct correlation between the NO<sub>x</sub> total emissions and the recycled waste quantity (0.105).

**Table 4** Correlation between the indicators of harmful gases emissions

Control Variables			CO <sub>2</sub> emission	Particulate matters total emission	NO <sub>x</sub> total emission	Recycled waste quantity
Cement production	CO <sub>2</sub> emission	Correlation	1.000	.999	.928	-.272
		Significance (2-tailed)	.	.033	.242	.824
		df	0	1	1	1
Particulate matters total emission	Particulate matters total emission	Correlation	.999	1.000	.946	-.223
		Significance (2-tailed)	.033	.	.210	.857
		df	1	0	1	1
NO <sub>x</sub> total emission	NO <sub>x</sub> total emission	Correlation	.928	.946	1.000	.105
		Significance (2-tailed)	.242	.210	.	.933
		df	1	1	0	1
Recycled waste quantity	Recycled waste quantity	Correlation	-.272	-.223	.105	1.000
		Significance (2-tailed)	.824	.857	.933	.
		df	1	1	1	0

*Source: Authors' own presentation*

Also, the correlation analysis has shown (Table 5) that between the cement production and recycled waste quantity there exists an inverse strong correlation (-0.800).

**Table 5** Correlations between the cement production and the recycled waste quantity

			Recycled waste quantity	Cement production
Spearman's rho	Recycled waste quantity	Correlation Coefficient	1.000	-.800
		Sig. (2-tailed)	.	.200
		N	4	4
	Cement production	Correlation Coefficient	-.800	1.000
		Sig. (2-tailed)	.200	.
		N	4	5

*Source: Authors' own presentation*

None of the obtained correlation coefficients are statistically significant, primarily because they are calculated on the basis of a short period of time.

The improvement of the Company's social performances is largely determined by its financial performances and in particular by company's economic value. This statement is confirmed by the results of a correlation analysis between the Company's economic value and selected indicators of social performances (Table 6).

**Table 6** Correlation analysis between the Company's economic value and the selected indicators of social performances

			Increase of the Company's economic value	No. of employees	No. of training hours per employee
Spearman's rho	Increase of the Company's economic value	Correlation Coefficient	1.000	-1.000**	.700
		Sig. (2-tailed)	.	.	.188
		N	5	5	5
	No. of employees	Correlation Coefficient	<b>-1.000**</b>	1.000	-.700
		Sig. (2-tailed)	.	.	.188
		N	5	5	5
	No. of training hours per employee	Correlation Coefficient	<b>.700</b>	-.700	1.000
		Sig. (2-tailed)	.188	.188	.
		N	5	5	5

\*\* . Correlation is significant at the 0.01 level (2-tailed).

*Source: Authors' own presentation*

It could be noted that there is a perfect inverse relationship between the number of employees and the Company's economic value (Spearman rank correlation coefficient - 1.000). Apropos, the reduction in the number of employees follows the reduction in the company's economic value. Between the Company's economic value and the number of training hours per employee there exists a direct relation (0.700). In other words, as the Company's economic value increases, the number of training hours per employee also

increases, which confirms the company's efforts towards improving the competencies of employees.

In addition, it is noticeable that between the number of employees and the number of training hours per employee there exists an inverse relationship (-0.700). The reason is that in the observed period the number of employees has been steadily decreasing, while the number of training hours per employee has registered a steady increase. This can be explained by the fact that the Company's management has focused more attention on additional training of existing employees.

## 5. CONCLUSION

Business activities that are carried out in Titan Cement Kosjerić include the process of ore extraction, crushing, grinding, mixing and baking of raw materials, cement grinding, packaging and distribution of the product. Due to the fact that these activities can make a potentially large environmental and social damage, the company's management activities are aimed at minimizing or eliminating environmental and social risks according to the business vision: "We strive to always achieve the business goals and create value in an ethical and socially responsible manner, making it less bad, striving to do better" (Titan Cementara Kosjerić, 2014, p. 9).

Titan Cement Kosjerić is an active promoter of the sustainable development concept. Recognizing the importance of inclusion in the sustainable development program for the Company's financial performance, and aware of the direct environmental impact of cement production, the Company's management committed to full responsibility in respecting of the sustainable development principles.

Consistent application of the sustainable development principles permeates the company's business that is directed towards the realization of the objectives in the field of corporate social responsibility until 2020. This statement is confirmed by the research results that provided the basis for making the following conclusions.

First, there is a high degree of interdependence between the total cement production, net profit and the increase of Company's economic value, as financial indicators of company's business performance.

Second, the continuous innovating of the production process by applying the best available technologies has contributed to reducing the natural raw materials consumption and increasing the secondary raw materials share in total consumption in the observed period.

Third, the reduction of the total CO<sub>2</sub> emission arises due to the measures taken to increase the energy efficiency of the clinker production process, reducing the clinker share in cement and using alternative fuels or biomass. With the reduction of CO<sub>2</sub> emission are also reduced the particulate matter total emissions and NO<sub>x</sub> total emission that occur during the production of cement. Among the particulate matter total emissions and NO<sub>x</sub> total emissions almost perfect direct correlation (0.946) is affirmed, which leads to the conclusion that in the whole observed period air emissions decreased. In addition, throughout the period the waste recycled quantity increased. All the above mentioned confirms the assumption that the Company made great efforts to reduce greenhouse gases emissions and more efficient packaging waste management in the observed period.

Fourth, regarding the Company's social performances through indicators - the number of employees and number of training hours per employee, it was found that between a number of employees and the Company's economic value there exists a perfect inverse relationship; and that between the company's economic value and the number of training hours per employee there exists a direct relation (0,700). Increasing the number of training hours per employee in the observed period, despite a constant reduction of the employees' number is explained by the predominant directionality of the Company's management to additional training of existing employees. It also confirms the Company's strategic commitment to improving the employees' quality and strengthening Company's social performances.

It could be concluded that the Company Titan Cement Kosjerić applies the good business practice that respects the basic sustainable development principles. Compliance with codes of ethics, continuous implementation of activities towards improving the employees competence and skills and continuous innovation of production processes by introducing technology that is less environmentally intensive contributing to the increasing of Company's economic value and encouraging positive changes in the Company's environmental and social performances.

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## **MEĐUZAVISNOST IZMEĐU EKOLOŠKIH I SOCIJALNIH PERFORMANSI I EKONOMSKE VREDNOSTI KOMPA NIJE: PRIMER TITAN CEMENTARE KOSJERIĆ**

*Cilj ovog rada je da ispita odnos između ekoloških i socijalnih performansi i ekonomske vrednosti kompanije na primeru Titan cementare Kosjerić, kao i da doprinese jasnijem razumevanju značaja integracije principa održivog razvoja u poslovne strategije i procese. Istraživanje je sprovedeno korišćenjem podataka o odabranim finansijskim i nefinansijskim performansama kompanije iz Izveštaja o društveno odgovornom poslovanju i održivom razvoju za period od 2011. do 2015. godine. U cilju potvrđivanja polaznih hipoteza korišćeni su metod analize, metod sinteze i metod korelacione analize. Empirijski nalazi ovog istraživanja ukazuju da postoji visok stepen međuzavisnosti između ekoloških i socijalnih performansi i ekonomske vrednosti kompanije, što je u skladu sa obavezivanjem kompanije na održivi razvoj i društveno odgovorno poslovanje. Glavni doprinos rada ogleda se u naglašavanju značaja realizacije društveno odgovorne prakse u kompanijama iz oblasti industrije cementa za unapređenje svih aspekata održivog poslovanja - finansijskog, ekološkog i socijalnog.*

*Ključne reči: održivi razvoj, ekološke i socijalne performanse, ekonomska vrednost kompanije, Titan cementara Kosjerić.*



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