

Key drivers of internal market changes and innovative tools towards an efficient business climate

IRIS MIHAJLOVIĆ¹, CVIJETA DJEVOJIĆ², MARINO STANKOVIĆ¹

¹Department of Economics and Business, University of Dubrovnik, Dubrovnik, CROATIA

²Department of Economic and Financial Affairs, General Hospital Dubrovnik, Dubrovnik, CROATIA
iris.mihajlovic@unidu.hr, cvijeta.djevojic@gmail.com, marino.stankovich@gmail.com

Abstract: - This paper has an emphasis on analytical approach to certain key factors of internal marketing. Examining the strength of their impact (financial and non-financial) on the employee motivation levels, in September 2019 the conducted survey comprised 300 respondents (sample size), employees - internal customers, nurses and hospital staff. Data were collected based on a survey of employee satisfaction, area of their jobs. Respondents were employees / hospital staff of the regional hospital center in the Republic of Croatia. Analyzed areas had been previously sequenced and grouped in accordance with key factors that corresponded to the areas of internal marketing with intensities of their impacts on the level of the satisfaction, motivation and the employee productivity. In the analysis, inferential statistics methods (Z-test, Chi-Square test) were used to answer the question of whether internal marketing instruments affect employment motivation, and to what extent is the response positive, to what extent they affect motivation, and indirectly, to work productivity. Questions related to salary, satisfaction with the basic salary, type of employment, and type of work provided answers about employee motivation with regard to the financial factor of internal marketing, and questions related to when employees use a break at work gave us the answer about the free time to which the employee is entitled to, and which affects the level of his satisfaction. The questions concentrated on work experiences of employees in the organization presented their loyalty to the non-profit organization. Main domains that represented key incentives throughout the interactive empowerments of key factors analyzed are education, participation in professional lectures and seminars, conferences, and additional training for application of innovative tools. Results confirm basic attitudes about employment in non-profit organizations, i.e. that the financial factor is not decisive in choosing employment. Results show narrow connection of loyalty with employee's motivation as non-financial factor of internal marketing, showing in that manner the interest of employees for achievements supported by the internal confidence and permanent positive behavior or the attitude. These research results contribute to improving the elements of internal marketing. Internal customers' attitudes and behavior (i.e., their satisfaction and commitment) is affected by the organizational atmosphere component. It is closely tied to internal customers' creativity and productivity. Therefore, it is an essential element of organizational performance.

Key-Words: - internal marketing, employee motivation, internal communication, non-profit organization, employee satisfaction

Received: November 26, 2020. Revised: March 28, 2021. Accepted: April 15, 2021. Published: May 7, 2021.

1 Introduction

As dominant logic result of evolution of science and profession, the marketing literature has widely adopted a service perspective [1] [2] [3] [4] [5]. Vargo and Morgan [6] pointed out the work of Frederic Bastiat that highlighted the importance of service (human effort), utility (i.e. value), and also Walras [7] putting an emphasis on importance of producer and consumer services interactions, on developing of integral economics and the new paradigm.

Although remaining in the shadow of scientific approach, co-creating values, sharing emotions, need the platform for transmission in the system of confidence and beliefs. Transformation of services as part of our lives shifts awareness of the service marketing empowering consumer and societal "well-being." This means that overall marketing is oriented towards services [1] [3], while, adding emphasis to the importance of research of services the presumption is that value is the grounds for to consumers to assess their interactions with the providers. Co-created values in communication

through the positive experiences in internal environment of the organization are empowered. Opposite to traditional paradigm, for some scholars, sharing economy could prove the base for key drivers shifting towards the core of Internal Marketing (IM). Sharing knowledge and skills – resources - between providers and internal consumers is a suggested way of creating value. Considering the preeminence attributed to loyalty in literature regarding service and marketing [8] this is an interesting perspective considering conditions if “providers do not attribute to the value to sharing services (to transmitting and sharing experiences from both sides), it is highly unlikely to be repeated. Loyalty is defined as an individual’s commitment to the company’s success, through the permanent stable activities, positive attitudes, and behavior, plenty of confidence in organization. It is expressed by the confidence of the individual that his engagement in the corresponding job is his best option. The result is a lack of consideration of other alternatives [9]. In accordance with previous, parallel digital tools such as Artificial Intelligence (AI), Blockchains help businesses to influence effectively, emotionally even psychologically their target audience, employees in key areas in internal environment, such as increasing employee benefits tools, productivity (by substitution or complementally usage of tools), innovations introduction, increasing internal customer satisfaction, improving business performance through employees’ data sharing. The request for insightful and valid service research addresses the anticipated changes in order to deal with creating more relevant jobs in the service marketing. It assumes a new system of values. It is supported by propulsion of inherent system of platforms. Crucial services in domains such as medical and healthcare depend on new technologies [10] while the assets of value and satisfaction are likely to be affected by this change. It will also affect the way internal buyers (employees in hospital) and external consumers perceive the quality of services. The relationships between (IM) and other relevant variables like internal customer satisfaction, service innovation, internal service quality, and the competitive advantage are analyzed. Competitive advantage stems from (IM).

2 Literature review on IM: frameworks, components

Surprisingly, traditional commercial marketing could be the most important obstacle for (IM) [11]. If a parallel is drawn between Internal Marketing

(IM) and traditional commercial marketing, it highlights the risk of objectifying employees, managing them via certain marketing mixes developed from segmentation techniques [11].

Internal marketing represents the capability of an organization to conduct marketing activities aimed at the employees. In recent times, internal marketing is becoming more important because it is essential for achieving competitive advantages in the long run. The newer economy poses challenges to businesses, highlighting the "soft" variables such as the workforce of the organization, their knowledge and abilities. The goals of internal marketing target people, i.e. skills of employees. Since people seemed being the key of the success, it is very important to select, to motivate them, while keeping in mind improvement of the staff for achieving competitive advantages.

Internal marketing, as part of holistic marketing, contains everything that service provider does to select, educate and motivate employees, providing good services. It indicates the application of the marketing philosophy of business to employees who serve external customers [12].

In order to motivate employees, undertaking an effort to recognize specific area of individual contributions, an effort must be proven by the company focusing on their achievements for reason to improve themselves acquainting new activities in working area of business, matching with new challenges, finally to provide the services to their customers in the best manner. Service provider (IM) is an umbrella term for a scope of different activities within an organization, aimed at developing service orientation and service user orientation among all employees.

The area of internal marketing is grounded on shared values of qualities of employees, found in beliefs, accomplished by activities. When determining the type of business, deciding on the service to be placed on the market, it must be ensured that employees are ready to provide that service to the user. Employees must be familiar with the mission and goals of the company and being without any doubts. They must have knowledge related to the execution of the tasks, competencies and qualifications by which responsibilities are redacted to provide a corresponding service.

Internal marketing is the work of a team with a high-frequency impact of individual responsibility. Success is indispensable only with the joint work and dedication of all employees within the organization. The sum of partial responsibilities and knowledge of contributions builds a common result

in all areas of business from procurement, production, finance, accounting, etc.

Only if the management successfully transmits the vision of the marketing strategy to all departments, the company can achieve the set goals. Vertical alignment of management levels and horizontal alignment between departments within the company are also important for successful internal marketing. Achieving a sustainable competitive advantage is no longer possible by using the reflection of past events in decision making processes which are based on financial indicators alone. Non-financial indicators as indicators of business performance are parameters which create long-term value and which companies focus on [13].

Today, most companies present non-financial indicators in their annual report, crucial for their business processes, such as customer perspective, product quality, operating cycle duration, internal processes, innovation employee satisfaction, and learning and growth perspective [14].

Companies have discovered what employee behavior is desirable while emphasizing the importance of ethical behavior that builds loyalty and trust. The importance of motivation, policies for rewarding ethical behavior, response to unethical behavior are essential to align in the ethical culture in the company [15].

The efficiency of non-profit companies in the field of health care is seen through the efficiency of their employees in performing their work in the best possible way, i.e. with full commitment to work, loyalty and motivation that will result in favorable business results. Some of the factors that affect employee satisfaction are: the ability to choose a job according to personal preferences, organizational structure within the company, in accordance with the work they do they receive financial compensation, acquiring new knowledge, interpersonal relationships and empathy, relationships with superiors, the possibility of advancement. These factors might have a big impact on employee satisfaction. It influences on positive feelings and satisfaction in the workplace.

The purpose of the research is to point out the influence of internal marketing instruments on employees' job satisfaction in a non-profit organization, i.e. to determine the elements of internal marketing that motivate employees and thus affect productivity.

The influential elements of internal marketing that will affect motivation are financial and non-financial forms of motivation. Financial forms include compensation for work done, and the

possibility of advancement, and non-financial, - personal work satisfaction, the possibility of additional education, free time, and type of work.

Simmons [16] claims that the pattern change in marketing has suggested an integrated approach to stakeholder-accountable marketing which accepts more socially accountable approach to employee expectations. Synayeva et al. highlighted the connections between education, health-care, economic growth, and the quality of institutions that are traditionally linked in the general vision and even HDI (Human Development Index) on macro level. They explored the intensity, the size of the HDI, the strength of the connection and the dependence of the same on the amount of social sphere resources [17]. Relationship marketing [18] seeks long-term, mutual, beneficial relationships with external and internal stakeholders (including employees). Therefore (IM) should be viewed in this way as an instrument to engage employees in an interactive manner [11]. Derived from service quality improvement, (IM) framework [19] has various discerning features: a) in order to make a shift in the employees attitudes, and to turn their focus on services, employees need to be treated as customers, b) by doing this there jobs also need to be seen as any given service of the company, c) this on the other hand requires using internal marketing techniques to engage service-oriented employees [20].

Innovations are prerequisites for the efficient communication, while employees must be interested in its active implementation, sharing new actions, approaches, knowledge. Innovation activity performance will be increased by employee motivation eventually leading to an increase in the extent of enterprise profitability and competitiveness [21]. The approach to defining innovation is based on the attitudes towards which it promotes the process of creating of new value for consumers, stakeholders or internal customers [22]. Innovation can be defined from an aspect of the idea, process, or product. It is important to delimit areas of intensity of innovation impact. Innovations are key drivers of transformation [22] that make pressure on total quality, efficient time use with respect to service providing [22]. Key driver of market changes towards innovations are internal customers, developing more efficient systems for establishing value-based infrastructure that emphasize loyalty based internal marketing, education oriented towards development of skills that are important in overlapping time, for more transparent activities that are presence in key time. Information and Communication Technology (ICT)

strengthened the business of direct service providers. Enabling the emergence of new innovative tools, business models are based on collaboration in internal environment building internal C2C. Companies have the option of choosing business models. By forming a network of providers, no insight into the actual provider was offered. The focus of a strategic corporate rethinking of nonprofit organizations is visible in business models based on organizational reengineering. Importance of using of new forms of partnerships to encourage the development is visible in creation of new business opportunities implementing B2B that achieve strengthened competitive position thus surviving in dynamic conditions. The development of (ICT) supports interaction between consumers and stakeholders even. As result of that interaction the following processes could be evident: business process reengineering (BPR) in nonprofit organizations, implementation of developmental strategies based on new forms of communications [22]. Through the specialization of marketing activities, organizational efficiency is tested. Such a model is based on an innovative business concept and a vision based on the selection, adoption and transformation of business resources, their optimal management and allocation in areas that will guarantee a compelling advantage and a global reach. IT infrastructure as a concept support requires the more technological performance level, including costs - contained in the multi applicable modality (from an optimal use of information, design and placement of services). It involves low costs and the possibility of multi-channel and multi-media, interactive communication in relation to the internal customers, and external incentives related to the competitors, customers and suppliers. Concerning the allocation of resources and experiences, smart actions have an emphasis on sustainable process of product customization bearing an optimal business condition based on responsible organizational structure, organizational culture and resources. In order to tackle any unpredictability seen as a challenge of the business environment, companies apply innovations in creating products and business tools for communication. According to Dachev and Lazanov, the communication and training raise awareness of the duties and responsibility for all positions, improving the quality of the training process [23].

Transferring resources and organizational skills from partners enable creation of business strengths. Traditional partnerships were motivated by the idea of cost reduction. Modern partnerships, intensive by the knowledge have goals focused in more

pronounced learning from partners. For this reason, one of the most cost-effective solutions belongs to Internet within the distribution channel - B2B model. Innovations, personalized approach and flexibility in the business in terms of uncertain and dynamic environmental conditions are preconditions for anticipating future organizational dynamics. Treating employees as internal customers leads to the changes in their attitude. Positive experiences of employees as internal buyers shift their attitudes. Improved service quality and competitive advantage are direct results of (IM), as well as more service-oriented employees [20].

2.1 Terminology distinction of (IM) in the area of healthcare

The terms definition has been a subject of a long-standing debate. Varey and Lewis state [20] that IM is a result of the notion of employees as an internal market of the organization which requires information, education, training reward and motivation. The key elements for attracting, satisfying and building employee loyalty are: selection, education, motivation, rewarding and employee trust.

Internal marketing aims to achieve certain goals, which are to increase the level of teamwork of employees, greater employee motivation, commitment to work and ethical behavior. In order to achieve these goals, various techniques and means are used: internal written materials and information, fostering trust in management, decorating the exterior and dressing employees in uniforms to promote the "personality" of the company and build a sense of belonging.

The specifics of non-profit organizations in the field of biomedicine are primarily in the motive for choosing employment. Regarding non-profit organizations versus for profit companies, their employees are of a different type than those employed in for profit companies since their motivation does not stem from earning but from vocation itself. Therefore, the ways of doing businesses, recruiting, motivating and retaining the work force of the non-profit sector differs from the non-profit one.

The management of such organizations uses different factors to manage employee satisfaction: cash benefits, the ability to perform different types of work that suit their desires and preferences, the possibility of additional education, the possibility of advancement, etc. These elements can greatly affect employee satisfaction and employee productivity.

The task of the organization is to find, train, motivate and retain such high-quality employees for

the mutual benefit of both, the company and the employees. As such level of satisfaction is visible to the company, i.e. employers, and to the employees - the better business, better and the higher quality of the services lead to more satisfied and the loyal client. Internal marketing ensures the acceptance of important marketing principles set by management, which must be respected.

2.2 The Components of (IM)

Training and education, being one of the main components of (IM) are identified as rewards systems as are all the Components of (IM). There are a number of ways to reward employees in the company, but the authors Parker, Adams and Zielinski [28] highlight the six most important types of rewards that include some benefits, skills development, individual incentives, recognitions, team incentives, incentives focused on organizational units. A team is a specific type of group, a certain number of people sharing complementing skills and a common goal and motive, and finally - collective responsibility to perform tasks [29]. Education and training, a reward system, fairness, and convenience were all identified as four measuring factors of (IM) by Yi and Yi [30] in a university hospital. Chen and Lin [31] introduced a scheme consisting of six dimensions: work support, organizational atmosphere, organizational communication, educational training, motivation, and empowerment. Bermúdez-González et al. [32] found three (IM) components: internal value exchange, internal communication, and training. Jeong and Lam [33] on the other hand suggested five elements of (IM): vision, communication, overall development, job training, and reward system. [30] [32] [33] [34] [35] [36] [37].

2.3 Influence of (IM) on employee satisfaction and Self-efficacy

In their study on the influence of (IM) on employee satisfaction in a culturally diverse work setting, Huang and Rundle-Thiele [35] conducted a study on how (IM) affects employee satisfaction in a work setting which is culturally diverse and they discovered three dimensions of (IM) internal communication, training, and internal market research. Lim [38] observed the correlation between IM activities, self-efficacy, job satisfaction, and customer-oriented attitude among hospital nurses. He has determined four dimensions of (IM): education and training, reward system, fairness, and convenience. Of these four, the author found that education and training were the most important.

Joung et al. [36] created and authenticated a scale that evaluated employee perception of (IM). Three factors were identified as good predictors of employee job satisfaction- vision, development, and rewards. Akonkwa [39] found a positive and significant relationship between (IM) and employee satisfaction. IM and internal customer satisfaction have been linked by a positive correlation through several studies. [40] [41] [42] [43] [44]. Environment and pleasant working climate, organizational activities, or organizational facilities provided to employees are all factors which can provide fun at work [45]. With an end aim of improving employee performance, constant activities which create feelings of joy and comfort must be organized by the management.

A beneficial correlation between individuals' self-efficacy and their positive attitudes has been revealed through several studies- research [46] [47]. Compeau and Higgins [48] found that self-efficacy has is an essential element for the development of individuals' feelings and behaviors. An increase in the self-efficacy of internal customers of the varieties of (IM) factors is expected provided they are appropriately compensated by the company [49]. It is crucial to take into consideration the job environment, education and training, and motivation when analyzing (IM) in hospitals in order to enlarge the self-efficacy of nurses. As Carson and Chase argue, motivation is supposed to be increased in accordance with the higher level of education [50].

3 Research framework and hypotheses

3.1 Research Framework

Berry [24] demonstrated how changes in employee attitude occur when they are treated as customers. Resulting by (IM), they become service oriented, meaning improved service quality and competitive advantage [20]. This research studies the effect (IM) has on the competitive advantage within the public healthcare domain. As an operating tool, we have created a framework with five (IM) components (internal communication, training and education, reward system, empowerment, and organizational atmosphere) with the application on the medical center of employees. The correlations between (IM), self-efficacy, internal customer satisfaction, the service innovation, internal quality service, and the competitive advantage were under close observation.

Data were collected by completing an online survey and with the combination of the printed survey in

September 2019. Core of research has an emphasis on the job satisfaction of employees of non-profit organization in Croatia. The duration of the survey was 20 days, after which the obtained data were statistically processed in order to get answers in relation to the set hypothesis.

Examining the strength of their impact (financial and non-financial) on employee motivation in the regional hospital Center of Republic of Croatia, an analytical approach to the certain key factors of internal marketing in the paper was conducted. The sample size of 300 employees - internal customers, nurses, and hospital staff contribute to review their competencies and the dynamics of changed behavior of respondents. Data were collected based on the survey on employee satisfaction at the workplace in September 2019. Respondents were employees / hospital staff of the regional hospital center in the Republic of Croatia. The areas that had been analyzed, in manner of intensities of the impacts include satisfaction, motivation and employee productivity. They have been sequenced, grouped through the key factors - areas of internal marketing. The questions are structured around the length of work experience of employees in the organization related to the loyalty of employees of the non-profit organization, education, and further permanent education, participation in professional lectures and seminars, conferences, additional training, application of innovative tools. Finding out close connection with employee's motivation and non-financial factors of internal marketing, results show behavioral orientation, internal incentives and to the interests of employees towards motivation. Issues related to the salary, satisfaction with the basic salary, type of employment, type of work, provide answers to the questions about employee's motivation considering the financial factor of internal marketing. Issues related to using a work break provided an answer related to the free time to which the employee is entitled, and if it affects the level of his satisfaction. The results of the research affirmed the hypothesis, i.e. the view that certain elements of internal marketing affect employee motivation. In the analysis, inferential statistical methods were used to answer the question whether internal marketing instruments affect employment motivation, (to what extent is the response is positive, to what extent they affect motivation), indirectly being productive through the work. In order to achieve productivity through the motivation and greater employee satisfaction, in the non-profit organization, the results of this research contribute to improving the elements of internal marketing.

3.2 Sample data

According to the classification based on the number of employees, small companies have up to 50 employees, medium-sized companies from 50 to 249 employees, and large ones over 250 employees. At the timeframe of data collection, the organization had 920 employees, of which 390 could meet the criteria for analysis. Of the total number of employees who could enter the analysis, the sample was 341 employees. Of this sample, the total number of correctly completed and returned surveys was 300, or 88% of the sample, which is considered a meritorious and representative result for analysis. The survey was completed by 300 employees employed in the hospital as non-profit organization, or 77% of the total number of employees who could have entered in this analysis. Data were collected in two ways. A printed questionnaire and a questionnaire via the Internet contained identical questions. The questions were structured as closed and open types of questions, and with the possibility of choosing more than one categorical answers. In that case, respondents could optionally choose one of the offered answers or several offered that were conceived in such a way. Out of the total number of completed surveys, 52 surveys, i.e. 17.3%, were filled out by printed questionnaires, and 248, i.e. 82.7% via the Internet. Of the total number of employees who could enter the analysis, i.e. 390, 345 of respondents represented women and 45 men. As only 10 men completed the survey, which is only 3.3% of the total number of employees surveyed, the results of the survey were not specifically processed by gender. The collections lasted for 20 days, and after that, the data were collected, they were processed and the answers were interpreted.

3.3 Hypotheses

Through this research, we determined how much the particular factor of internal marketing affects motivation. The data were grouped into 4 groups, where each group represented one hypothesis. The questions that will be addressed in each hypothesis were defined. After comparing two variables, the development of the Chi-square test for each data group was started.

H1 – Loyalty affects motivation. For loyalty, work experience within the professional field was taken as an indicator, and motivation is reflected through additional education. The assumption is that loyal employees prefer self-development in the profession in time of the duration of their working experience, motivating them to receive additional education in addition to their work.

H2 – The amount of the basic salary affects motivation. To prove / disprove this hypothesis, data concerning employee salaries – taken into account is originally taken in national currency. For the purposes of this paper, it was converted into indicative amounts in euros to obtain a better perception of salary according to international standards. This hypothesis, i.e. its refutation, indicates the existence of other key factors that are important as generators of satisfaction and motivation.

H3 – Employees with an indefinite term contract, use the break time more often, and this affects the motivation level. To prove or reject this hypothesis, questions on the type of employment and the use of breaks were taken into analysis. The assumption was that employees with an indefinite term contract mostly use their right to the break, while others use that right less, most often due to proving themselves as model employees at work. The right to use a break indirectly affects employee satisfaction and motivation.

H4 – Motivation for work is reflected through the desire for professional development, showing dynamics of changes towards the education. Two calculations were made for the hypothesis. The education and activities of employees that result in professional development using new technologies and innovative tools for acquiring competencies in the field of work, as well as additional participation in professional conferences and writing papers in the field of popularization of science and the professional development, had been taken into account and considered. We wanted to prove that employees go to professional lectures in order to acquire knowledge, master new technologies and innovations, i.e. to write professional papers in which they participate in the popularization of the profession and science in proportion to their education.

4 Data and methodology of research

A survey was used to collect the views and opinions of the employees of the regional hospital center.

The statistical unit included in the sample is represented by the respondents, i.e. hospital staff / nurses of the regional hospital center in Croatia.

Out of the total number of employees (920), 390 or more than third, are the medical staff, nurses. Out of 341 of sent questionnaires, the number of respondents that validly filled is 300. In total, about 77% of them were considered meritorious and representative for the analysis.

The method of sampling was also used in the paper. This method was used in processing the data

collected by the survey. The inductive method was used to demonstrate the impact of internal marketing on nonprofit employees. The deductive method was used to explain the impact of employee satisfaction on the quality of service provided.

The analysis for comparing statistic variables in each hypothesis in this article, are provided by IBM's software SPSS Statistics. IBM SPSS Statistics represents a powerful statistical platform system, which contains wide range of possibilities for diverse statistical data analyzes. For researching proposes of this paper, we perform statistical analyses such as correlation, comparison of variables, chi-squared test, Cramer's V test in SPSS Statistics software.

A Chi-square test, also written as χ^2 test, is a non-parametric statistical hypothesis test that is used for performing data analysis when the result of Chi-square distribution under the null hypothesis, specifically Pearson's chi-square test. Pearson's chi-square test determines a statistical case of significant difference between the expected frequencies and the observed frequencies, in one or more categories of the contingency table.

Unlike most statistics, the Chi-square (χ^2) can provide information not only on the significance of any observed differences, but also provides detailed information on exactly which categories account for any differences found. Thus, the amount and detail of information this statistic can provide renders it one of the most useful tools in the researcher's array of available analysis tools. As with any statistic, there are requirements for its appropriate use, which are called "assumptions" of the statistic. Additionally, the χ^2 is a significance test, and should always be coupled with an appropriate test of strength.

Miller and Siegmund argued that Chi-square test is a non-parametric statistic, also called a distribution free test. Non-parametric tests should be used when any one of the following conditions pertains to the data:

1. The level of measurement of all the variables is nominal or ordinal.
2. The sample sizes of the study groups are unequal; for the χ^2 the groups may be of equal size or unequal size whereas some parametric tests require groups of equal or approximately equal size.

The original data were measured at an interval or ratio level, but violate one of the following assumptions of a parametric test:

- a. The distribution of the data was seriously skewed or kurtotic (parametric tests assume approximately normal distribution of the

dependent variable), and in this way the researcher has to use a distribution free statistic rather than a parametrical.

- b. The data affect the assumptions of equal variance or uniformed.
- c. For any of a number of reasons, the continuous data were collapsed into a small number of categories, and thus the data are no longer interval or ratio. [51]

Bewick explained the situation for non-parametric tests, including the χ^2 assume the data were obtained through random selection. However, it is not uncommon to find inferential statistics used when data are from convenience samples rather than random samples. (To have confidence in the results when the random sampling assumption is violated, several replication studies should be performed with essentially the same result obtained). Each non-parametric test has its own specific assumptions as well. The assumptions of the Chi-square include:

1. The data in the cells should be frequencies, or counts of cases rather than percentages or some other transformation of the data.
2. The levels (or categories) of the variables are mutually exclusive. That is, a particular subject fits into one and only one level of each of the variables.
3. Each subject may contribute data to one and only one cell in the χ^2 . If, for example, the same subjects are tested over time such that the comparisons are of the same subjects at Time 1, Time 2, Time 3, etc., then χ^2 may not be used.
4. The study groups must be independent. This means that a different test must be used if the two groups are related. For example, a different test must be used if the researcher's data consists of paired samples, such as in studies in which a parent is paired with his or her child.
5. There are 2 variables, and both are measured as categories, usually at the nominal level. However, data may be ordinal data. Interval or ratio data that have been collapsed into ordinal categories may also be used.
6. The value of the cell *expecteds* should be 5 or more in at least 80% of the cells, and no cell should have an expected of less than one. This assumption is most likely to be met if the sample size equals at least the number of cells multiplied by 5. Essentially, this assumption specifies the number of cases (sample size) needed to use the χ^2 for

any number of cells in that χ^2 . This requirement will be fully explained in the example of the calculation of the statistic in the case study example [52].

The formula for calculating a Chi-Square is:

$$\chi^2 = \sum \frac{(O - E)^2}{E},$$

where O means observed value(s) and E is expected value(s). The chi-squared test (χ^2) is a measure of the difference between the observed and expected frequencies of the outcomes of a set of events or variables.

Streiner went through in details about obtaining algebraic shapes in calculation of Chi-square test. Firstly, calculate the sum of each row, and the sum of each column. These sums are called the "marginals" and there are row marginal values and column marginal values.

The second step is to calculate the *expected* values for each cell. In the Chi-square statistic, the "expected" values represent an estimate of distribution. Expected values must reflect both the incidence of cases in each category and the unbiased distribution of cases. Chi-Square *expecteds* are calculated as follows:

$$E = \frac{M_R * M_C}{n}$$

where *E* represents the cell expected value, *M_R* represents the row marginal for that cell, *M_C* shows the column marginal for that cell, and *n* is the total sample size. Specifically, for each cell, its row marginal is multiplied by its column marginal, and that product is divided by the sample size [53].

The Chi-square table requires the table's degrees of freedom (df) in order to determine the significance level of the statistic. The degrees of freedom for a χ^2 table are calculated with the formula:

$$(\text{Number of rows} - 1) \times (\text{Number of columns} - 1).$$

For example, a 2 × 2 table has 1 df. (2-1) × (2-1) = 1. A 3 × 3 table has (3-1) × (3-1) = 4 df. A 4 × 5 table has (4-1) × (5-1) = 3 × 4 = 12 df. Assuming a χ^2 value of 12.35 with each of these different df levels (1, 4, and 12), the significance levels from a table of χ^2 values, the significance levels are: df = 1, P < 0.001, df = 4, P < 0.025, and df = 12, P > 0.10. Note, as degrees of freedom increase, the P-level becomes less significant, until the χ^2 value of 12.35 is no longer statistically

significant at the 0.05 level, because P was greater than 0.10.

For the sample table with 3 rows and 2 columns, $df = (3-1) \times (2-1) = 2 \times 1 = 2$. Using a χ^2 table, the significance of a Chi-square value of 12.35 with 2 df equals $P < 0.005$. This value may be rounded to $P < 0.01$ for convenience. The exact significance when the Chi-square is calculated through a statistical program is found to be $P = 0.0011$.

As the P-value is less than $P < 0.05$, the researcher rejects the null hypothesis and accepts the alternate hypothesis. This procedure of interpreting in analysis will be explained better on a concrete example in the part related to research results.

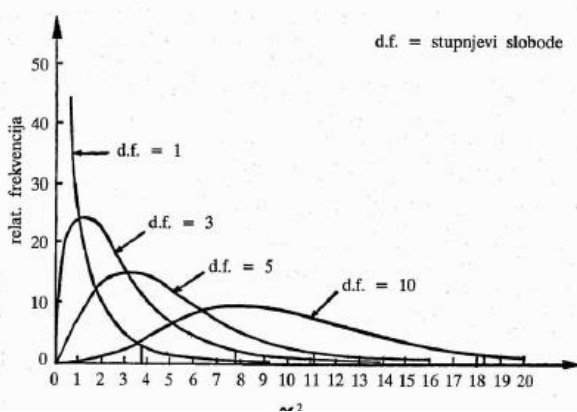


Fig. 1. Distribution of sample in Chi-square test - different degrees of freedom (*df*)

It depends on the size of the difference between actual and observed values, the degrees of freedom, and the samples size. χ^2 can be used to test whether two variables are related or independent from one another or to test the goodness-of-fit between an observed distribution and a theoretical distribution of frequencies.

To totalize statistical analysis of this paper, we demonstrate one another inferential test with independent variables. Based on this analysis, the most commonly used test is the Cramer's V test of significance.

A Cramer's V (*V*) is a way of calculating correlation in tables that have more than 2*2 rows and columns. It is a coefficient for measuring association used as post-test to determine strengths of association after chi-square has determined significance. *V* is calculated by first calculating chi-square, then using the following calculation:

$$V = \sqrt{\frac{\chi^2}{N(k-1)}}$$

where χ^2 is chi-square and *k* is the number of rows or columns in the table. In discussion between these

tests, chi-square implicates that there is a significant correlation between variables, but it does not say just how significant and important the hypothesis is. The Cramer's V is a post-test to give this additional information.

Describing Strength of Association:
 Characterizations

- >.5 high association
- .3 to .5 moderate association
- .1 to .3 low association
- 0 to .1 little if any association

For example, in any correlation, a value of 0.25 is a weak correlation. It shows up that a relatively weak correlation could be expected when a phenomena is only partially dependent on the independent variable.

5 Results and discussion

The answers to the questions about the length of service in the organization gave us a clearer picture of the employee loyalty to the organization. The answers were divided into groups per each subsequent as following: a) five years of service, and the table shows that 53.98% of employees have up to 15 years of service, and b) 46.02 of them have between 15 and 40 years of service. The results speak in favor of the fact that employees are quite loyal to the organization. Only 19.32% of employees have work experience in the organization up to 5 years. Table 1 shows the data in the work experience of the respondents grouped in periods of 5 years.

Table 1. Work experience in the profession (years)

Years of experience in the profession	% of respondents	Number of respondents
0 - 4	19,32%	58
5 - 9	16,48%	49
10 - 14	18,18%	55
15 - 19	10,23%	31
20 - 24	5,68%	17
25 - 29	13,07%	39
30 - 34	7,95%	24
35 - 39	3,98%	12
40 -	5,11%	15
TOTAL	100,00%	300

Source: Authors' processing of data

Questions of education, further education with work, writing professional papers, attending

professional lectures, using computers, and using a foreign language at work, in addition speak in favor of employee motivation by non-financial factors of internal marketing. It indicates the interest of employees for further training and progress.

Regarding education, 53% of respondents answered that they have a high school diploma, 33% of respondents have a university degree, and 14% of respondents have a higher university degree.

36.41% of the respondents did not attend to any additional education. 33.70% of respondents had finished higher education, in addition to work, 16.30% of them graduated from college in addition to work, 10.87% stated that they finished something else in addition to work, and 2.72% completed a differentiated year in addition to work. Fig. 2 presents data on completed additional education.

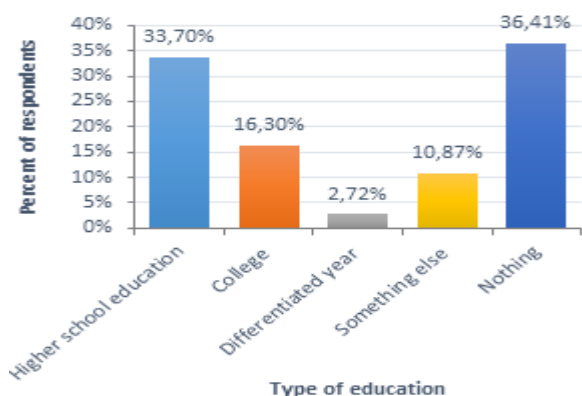


Fig. 2. Additional education in addition to work after the completion of regular education - by type of education

Source: Authors' processing of data

When asked about writing professional papers, 69.32% of respondents answered that they do not write professional papers, 20.45% contribute in writing professional papers when they are included in the paper, and 10.23% write professional papers at least once a year. The data is presented in table 2.

Table 2. Writing professional papers

The reason for writing a professional paper	% of respondents
At least once a year	10,23%
When I'm included in a paper	20,45%
I do not write professional papers	69,32%

Source: Authors' processing of data

Reasons for attending professional lectures gave the following answers: 44.32% of respondents answered that they go to professional lectures due to business obligations, 26.14% due to innovations in the profession, use of digital tools in overcoming barriers to knowledge acquisition, 21.59% attend professional lectures because they consider it as their obligation, and 7.95% do not attend professional lectures. Table 3 shows the reasons for attending professional lectures.

Table 3. The reason for attending professional lectures

The reason for attending professional lectures	% of respondents
Due to innovations in the profession, the use of digital tools in overcoming barriers to knowledge acquisition	26,14%
I consider education my obligation	21,59%
Due to business obligations	44,32%
I don't attend professional lectures	7,95%

Source: Authors' processing of data

When asked about the use of computers, the vast majority of respondents said that they regularly use computers at work, as many as 86.36%, 7.95% of respondents use them occasionally, 5.11% use computers only at home, and 0.57% stated that they never use a computer. When asked about the use of a foreign language in business, the answer was also mostly positive. 43.18% of respondents speak fluently and they have a writing competence in this foreign language, 39.77% of them understand but speak poorly, while 12.50% use the language with a dictionary, and 4.55% stated none of the above.

Answers to questions about the amount of salary, satisfaction with the basic salary, type of employment, and the type of work speak about the motivation level of employees with regard to the financial factor of internal marketing.

Most employees, i.e. 67% of them have a basic salary between 550 and 800 €, while 27% of respondents have a salary between 800 and 1050 €. The number of employees that have jobs with higher salaries is much smaller and i.e. refers to higher education, i.e. 6% of them. Table 4 shows data on the amount of salary in relation to the education of the respondents.

Regarding satisfaction with the level of the basic salary, 93% of them stated that they were not satisfied with their basic salary, and 7% of them were satisfied with the basic salary, which is presented in table 5.

Table 4. The ratio of salary and education

Basic salary (in euros)	Education	% of respondents
550 – 800	High school	41,48%
	Higher school	18,18%
	College	7,39%
Total 550 – 800		67,05%
800 – 1050	High school	9,09%
	Higher school	13,64%
	College	4,55%
Total 800 – 1050		27,27%
1050 – 1300	High school	0,00%
	Higher school	0,00%
	College	1,14%
Total 1050 – 1300		1,14%
1300 –	High school	0,00%
	Higher school	0,00%
	College	0,57%
Total 1300 –		0,57%
I don't want to answer	High school	2,27%
	Higher school	1,70%
	College	0,00%
Total „I don't want to answer“		3,98%

Source: Authors' processing of data

Table 5. Satisfaction with the basic salary

Salary in euros	Satisfaction with the basic salary (in %)	
	Yes	No
550 – 800	4,24%	95,76%
800 – 1050	10,42%	89,58%
1050 – 1300	50,00%	50,00%
1300 –	100,00%	0,00%
I don't want to answer	14,29%	85,71%
Total	7,39%	92,61%

Source: Authors' processing of data

The majority of respondents have a steady employment, i.e. 88% of them, 9% have a fixed-term contract, while 3% of respondents mentioned a third work option. When asked about the form of work in the non-profit organization, respondents gave the following answers: 43% percent work in shifts, 34.47% work in the first shift, 10.19% are on duty in their work, 7.28% are on standby, and 4.37% work in three shifts.

The answers to the questions on the use of a break at work speak about the free time to which the employee is entitled, and it affects the level of his/her satisfaction. 44% of respondents stated that they never use a break, 40% of respondents sometimes use a break, and only 16% of respondents stated that they use a break regularly. Table 6 shows the use of break in relation to the form of work.

Table 6. The relationship between the form of work and the use of breaks

Form of work	Using a break		
	Regularly	Sometimes	Never
Turnus	8,89%	35,56%	55,56%
First shift	23,94%	46,48%	29,58%
Three shifts	11,11%	66,67%	22,22%
On duty	33,33%	23,81%	42,86%
Standby	26,67%	13,33%	60,00%
Turnus	8,89%	35,56%	55,56%

Source: Authors' processing of data

The Chi-square test method was used to prove the hypotheses.

H1 – Loyalty affects motivation. By correlating data of work experience in the field and additional education, received data, which is calculated with given degrees of freedom 8, the level of significance of 5% has obtained critical value of 7.63. The result of Chi-square statistics is 6.425, which is less than the critical value, so the hypothesis is accepted.

The result of Chi-square approximate significance is 60%, which is higher than the required probability of matching the observed and expected values of 50%.

The result of Cramer's V approximate significance is 65%, which is higher than the required probability of matching the observed and expected values of 50%. Then, we can assume that these two variables are in high association.

Therefore, we can determine that loyalty affects motivation as assumed in the hypothesis. The desire for personal advancement through further education is consistent with the hypothesis that employees prefer self-development in the profession over the duration of the work experience. Longer employment encourages employees to further training. However, it is significant that this desire is especially pronounced until the 25th year of service, but it continues until the 35th year in reduced intensity. This is in line with the acquisition of work experience, which after some time has limited opportunities to expand.

Table 7. Work experience (years) * Additional education Crosstabulation

Work experience (years)		Additional education		
		No	Yes	Total
0-4	Count	22	36	58
	Expected Count	21,65	36,35	58,0
	% within Work experience (years)	38,2%	61,8%	100,0%
	% within Additional education	19,7%	19,1%	19,3%
	Adjusted Residual	0,1	-0,1	
5-9	Count	19	31	50
	Expected Count	18,67	31,33	50,0
	% within Work experience (years)	37,9%	62,1%	100,0%
	% within Additional education	16,7%	16,4%	16,5%
	Adjusted Residual	0,1	-0,1	
10-14	Count	15	39	54
	Expected Count	20,16	33,84	54,0
	% within Work experience (years)	28,1%	71,9%	100,0%
	% within Additional education	13,6%	20,9%	18,2%
	Adjusted Residual	-1,2	1,2	
15-19	Count	10	20	30
	Expected Count	11,2	18,8	30,0
	% within Work experience (years)	33,3%	66,7%	100,0%
	% within Additional education	9,1%	10,9%	10,2%
	Adjusted Residual	-0,4	0,4	
20-24	Count	5	12	17
	Expected Count	6,35	10,65	17,0
	% within Work experience (years)	30,0%	70,0%	100,0%
	% within Additional education	4,5%	6,4%	5,7%
	Adjusted	-0,5	0,5	

	Residual			
25-29	Count	20	19	39
	Expected Count	14,56	24,44	39,0
	% within Work experience (years)	52,2%	47,8%	100,0%
	% within Additional education	18,2%	10,0%	13,1%
	Adjusted Residual	1,6	-1,6	
30-34	Count	12	12	24
	Expected Count	8,96	15,04	24,0
	% within Work experience (years)	50,0%	50,0%	100,0%
	% within Additional education	10,6%	6,4%	8,0%
	Adjusted Residual	1,0	-1,0	
35-39	Count	2	10	12
	Expected Count	7,0	5,0	12,0
	% within Work experience (years)	14,3%	85,7%	100,0%
	% within Additional education	1,5%	5,5%	4,0%
	Adjusted Residual	-1,3	1,3	
40-...	Count	7	9	16
	Expected Count	5,97	10,03	16,0
	% within Work experience (years)	44,4%	55,6%	100,0%
	% within Additional education	6,1%	4,5%	5,1%
	Adjusted Residual	0,4	-0,4	
Total	Count	112	188	300
	Expected Count	112,0	188,0	300,0
	% within Work experience (years)	37,5%	62,5%	100,0%
	% within Additional education	100,0%	100,0%	100,0%

Source: Authors' processing of data

Table 8. H1 Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)

Pearson Chi-Square	6,425 ^a	8	0,600
Likelihood Ratio	6,628	8	0,577
Linear-by-Linear Association	0,407	1	0,524
N of Valid Cases	300		
*The minimum expected count is 7,63.			

Source: Authors' processing of data

Table 9. H1 – Symmetric Measures

		Value	Approximate Significance
Nominal by Nominal	Phi	0,275	0,649
	Cramer's V	0,195	0,649
	Contingency Coefficient	0,265	0,649
N of Valid Cases		300	

Source: Authors' processing of data

H2 – Salary levels and salary satisfaction affect motivation. By correlating data on the amount of the basic salary and satisfaction with the salary, data were obtained. This, in addition to the calculated degrees of freedom 3, the significance level of 5%, gave a critical value of 0.22. The result of Chi-square statistics is 18.253, which is greater than the critical value, so the hypothesis is rejected.

The result of Chi-square test is approximately equal to 0.00, which is less than the required value and matches the observed and expected values of 50%. Therefore, we can conclude that this hypothesis is rejected, because research has shown that the financial factor does not affect the motivation.

The result of Cramer's V approximate significance equals to 0%, which is less than the required value matches of 50%, so these two variables are not in association.

Rejection of this hypothesis actually confirms the basic attitudes about employment in non-profit organizations, i.e. that the financial factor is not decisive in choosing employment, but people opt for these jobs even if they are not satisfied with the financial conditions. The vast majority of employees are dissatisfied with the amount of the basic salary, regardless of the amount. However, they continue to do their job, because their job is more than just that, it is a calling.

Table 10. Salary levels * Salary satisfaction Crosstabulation

Salary levels	Salary satisfaction		
	No	Yes	Total

550-800	Count	193	9	201
	Expected Count	186,26	14,74	201,0
	% within Salary levels	95,8%	4,2%	100,0%
	% within Salary satisfaction	69,3%	38,5%	67,0%
	Adjusted Residual	2,3	-2,3	
800-1050	Count	73	9	82
	Expected Count	75,99	6,01	82,0
	% within Salary levels	89,6%	10,4%	100,0%
	% within Salary satisfaction	26,4%	38,5%	27,3%
	Adjusted Residual	-0,9	0,9	
1050-1300	Count	2	1	3
	Expected Count	5,0	5,0	10,0
	% within Salary levels	33,3%	66,7%	100,0%
	% within Salary satisfaction	0,6%	15,4%	1,7%
	Adjusted Residual	-4,0	4,0	
N/A	Count	10	4	14
	Expected Count	5,0	12,97	17,97
	% within Salary levels	85,7%	14,3%	100,0%
	% within Salary satisfaction	3,7%	7,7%	4,0%
	Adjusted Residual	-0,7	0,7	
Total	Count	278	22	300
	Expected Count	278,0	22,0	300,0
	% within Salary levels	92,6%	7,4%	100,0%
	% within Salary satisfaction	100,0%	100,0%	100,0%

Source: Authors' processing of data

Table 11. H2 Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	18,253 ^a	3	0,000
Likelihood Ratio	9,723	3	0,021

Linear-by-Linear Association	6,663	1	0,010
N of Valid Cases	300		
*The minimum expected count is 0,22.			

Source: Authors' processing of data

Table 12. H2 – Symmetric Measures

		Value	Approximate Significance
Nominal by Nominal	Phi	0,322	0,000
	Cramer's V	0,322	0,000
	Contingency Coefficient	0,307	0,000
N of Valid Cases		300	

Source: Authors' processing of data

H3 – Employees with an indefinite term contract use the break time more often, affecting on the motivation. To prove this hypothesis, we compared the data on the type of employment and the use of breaks, where with the calculated degrees of freedom 6, the significance level of 5%, the critical value of 0.48 was obtained. The result of the Chi-square statistics is 4.336, which is more than the critical value, so the hypothesis is rejected.

The result of the Chi-square test is approximately equal to 63.1%, which is more than the required value of matching the observed and expected values of 50%.

The result of Cramer's V approximate significance is 63,1% same as asymptotic significance in chi-square test, which is higher than the required value matches of 50%, so these two variables are in high association.

Therefore, research has shown that employees, regardless of the type of employment, in most cases do not exercise their right to a break. The premise of employee behavior is that older, more experienced employees will transfer part of the work to younger colleagues who do not yet have permanent employment, in order to make it easier for themselves. More frequent use of breaks during work is an indicator of such behavior. However, the type of employment was shown to have no effect on the frequency of use of the break. Moreover, most employees do not exercise this right on a regular basis, which is an indicator of high motivation, but it can also be a source of dissatisfaction, and management should pay attention to this segment.

Table 13. Type of employment * Using a break Crosstabulation

Type of	Using a break
---------	---------------

employment		Never	Some-times	Regul arly	Total
Definite – shorter than 3 years	Count	9	9	2	20
	Expected Count	8,87	7,93	5,0	21,8
	% within Type of employment	41,7%	41,7%	16,7%	100,0 %
	% within Using a break	6,4%	7,1%	7,1%	6,8%
	Adjusted Residual	-0,2	0,1	0,1	
Definite – longer than 3 years	Count	2	2	1	5
	Expected Count	5,0	5,0	5,0	15,0
	% within Type of employment	33,3%	33,3%	33,3%	100,0 %
	% within Using a break	1,3%	1,4%	3,6%	1,7%
	Adjusted Residual	-0,4	-0,2	0,8	
Indefinite	Count	121	102	43	266
	Expected Count	117,93	105,51	42,56	266,0
	% within Type of employment	45,5%	38,5%	16,0%	100,0 %
	% within Using a break	91,0%	85,7%	89,3%	88,6%
	Adjusted Residual	0,9	-1,0	0,1	
Other	Count	2	7	0	9
	Expected Count	5,0	5,0	5,0	15,0
	% within Type of employment	20,0%	80,0%	0,0%	100,0 %
	% within Using a break	1,3%	5,7%	0,0%	2,8%
	Adjusted Residual	-1,1	1,9	-1,0	
Total	Count	133	119	48	300
	Expected Count	133,0	119,0	48,0	300,0
	% within Type of employment	44,3%	39,8%	15,9%	100,0 %

	% within Using a break	100,0 %	100,0 %	100,0 %	100,0 %
--	------------------------	---------	---------	---------	---------

Source: Authors' processing of data

Table 14. H3 Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	4,336 ^a	6	0,631
Likelihood Ratio	4,709	6	0,582
Linear-by-Linear Association	0,056	1	0,813
N of Valid Cases	300		

*The minimum expected count is 0,48.

Source: Authors' processing of data

Table 15. H3 – Symmetric Measures

		Value	Approximate Significance
Nominal by Nominal	Phi	0,157	0,631
	Cramer's V	0,111	0,631
	Contingency Coefficient	0,155	0,631
N of Valid Cases		300	

Source: Authors' processing of data

H4 – Motivation for work is reflected through the desire for professional development. To prove this hypothesis, calculations were performed on two types of data. The professional qualifications and activities of employees that result in professional development were taken into account, such as writing professional papers and attending on professional lectures. We wanted to prove that employees that go to professional lectures seek to acquire knowledge, mastering new technologies and innovations, writing professional papers, and participating in the popularization of the profession and the science in proportion to acquiring the qualifications.

By comparing the data on professional qualifications with the writing of professional papers, obtained data in addition to the calculated degrees of freedom 4, and significance levels of 5%, gave a critical value of 2.45. The result of the chi-squared statistics is 21.547, which is higher than the critical value, so the hypothesis is rejected.

The result of approximate significance chi-squared test is approximately equal to 0, which is less than the required value of matching the observed and expected values of 50%. Therefore, we can conclude that this hypothesis is rejected.

The result of Cramer's V approximate significance equals to 0%, which is less than the required value matches of 50%, so these two variables are not in association.

Table 16. Professional qualifications * Writing professional papers Crosstabulation

Professional qualifications		Writing professional papers			
		At least once a year	Only when included	I don't write	Total
High school	Count	7	26	126	159
	Expected Count	16,43	32,86	109,71	159,0
	% within Professional qualifications	4,3%	16,1%	79,6%	100,0 %
	% within Writing professional papers	22,2%	41,7%	60,7%	52,8%
	Adjusted Residual	-2,7	-1,5	3,1	
Higher school	Count	10	27	63	10
	Expected Count	10,33	20,67	69,0	100,0
	% within Professional qualifications	10,2%	27,1%	62,7%	100,0 %
	% within Writing professional papers	33,3%	44,4%	30,3%	33,5%
	Adjusted Residual	0,0	1,6	-1,3	
College	Count	14	9	18	41
	Expected Count	5,0	8,47	28,29	41,76
	% within Professional qualifications	33,3%	20,8%	45,8%	100,0 %
	% within Writing professional papers	44,4%	13,9%	9,0%	13,6%
	Adjusted Residual	4,0	0,0	-2,7	
Total	Count	31	62	207	300
	Expected Count	31,0	62,0	207,0	300,0

% within Professional qualifications	10,2%	20,5%	69,3%	100,0%
% within Writing professional papers	100,0%	100,0%	100,0%	100,0%

Source: Authors' processing of data

Table 17. H4a Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	21,547 ^a	4	0,000
Likelihood Ratio	17,887	4	0,001
Linear-by-Linear Association	5,478	1	0,019
N of Valid Cases	300		

*The minimum expected count is 2,45.

Source: Authors' processing of data

Table 18. H4a – Symmetric Measures

		Value	Approximate Significance
Nominal by Nominal	Phi	0,350	0,000
	Cramer's V	0,247	0,000
	Contingency Coefficient	0,330	0,000
N of Valid Cases		300	

Source: Authors' processing of data

Another type of data in this hypothesis, referred to education versus attending professional lectures. Education and attendance at professional lectures were taken into account. We wanted to prove that employees go to professional lectures, relative to the degree of education they have obtained.

By comparing the data on professional qualifications and attending professional lectures, data were obtained which, in addition to the calculated 6 degrees of freedom, and the significance level of 5%, gave a critical value of 1.91. The result of the Chi-square statistics is 12.667, which is greater than the critical value, so the hypothesis rejects it.

The result of the chi-squared test is approximately equal to 5%, which is less than the required value of matching the observed and expected values of 50%. The result of Cramer's V approximate significance is 5% same as the result of the chi-square test significance, which is less than the required value matches of 50%, so these two

variables are not in association. Therefore, we can conclude that this hypothesis is rejected.

Table 19. Professional qualifications * Attending professional lectures Crosstabulation

Professional qualifications		Attending professional lectures					Total
		<i>I consider education my obligation ...</i>	<i>Due to innovations in the profession ...</i>	<i>Due to business obligations</i>	<i>I don't attend professional lectures</i>		
High school	Count	22	39	84	14	159	
	Expected Count	33,39	41,34	71,02	13,25	159	
	% within Professional qualifications	14,00%	24,70%	52,70%	8,60%	100,00%	
	% within Attending professional lectures	34,20%	50,00%	62,80%	57,10%	52,80%	
	Adjusted Residual	-2,6	-0,4	2,4	0,3		
Higher school	Count	27	24	41	9	101	
	Expected Count	21,21	26,26	45,12	8,41	101	
	% within Professional qualifications	27,10%	23,70%	40,70%	8,50%	100,00%	
	% within Attending professional lectures	42,10%	30,40%	30,80%	35,70%	33,50%	
	Adjusted Residual	1,3	-0,5	-0,7	0,2		
College	Count	14	15	9	2	40	
	Expected Count	14	15	9	2	40	
	% within Professional qualifications	8,4%	10,4%	17,87%	5%	41,67%	
	% within Attending professional lectures	37,50%	37,50%	20,80%	4,20%	100,00%	
	Adjusted Residual	0,0	0,0	0,0	0,0		

	lectures					
	Adjusted Residual	23,70 %	19,60 %	6,40%	7,10%	13,60 %
	Adjusted Residual	2	1,4	-2,5	-0,7	
Total	Count	63	78	134	25	300
	Expected Count	63	78	134	25	300
	% within Professional qualifications	21,60 %	26,10 %	44,30 %	8,00%	100,00 %
	% within Attending professional lectures	100,00 %	100,00 %	100,00 %	100,00 %	100,00 %

Source: Authors' processing of data

Table 20: H4b Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	12,667 ^a	6	0,049
Likelihood Ratio	13,062	6	0,042
Linear-by-Linear Association	2,516	1	0,113
N of Valid Cases	300		

*The minimum expected count is 1,91.

Source: Authors' processing of data

Table 21. H4b – Symmetric Measures

		Value	Approximate Significance
Nominal by Nominal	Phi	0,268	0,049
	Cramer's V	0,190	0,049
	Contingency Coefficient	0,259	0,049
N of Valid Cases		300	

Source: Authors' processing of data

The result of the first analysis shows that employees will not necessarily be motivated to write professional papers. The basic assumption was that older, more educated employees would have a greater desire for professional advancement, but the results proved different. The main reason for such results may be that the self-development of nurses and other employees in the workplace does not have to be limited and conditioned by the criteria for writing professional papers, contrary to the

achievements of physicians which are mainly conditioned by these criteria. The cause may also be the absence of a condition that defines it as an obligation.

The result of the second analysis indicates that employees with higher education will not necessarily be motivated to go to professional lectures. The same assumption was valid here and again the results proved to be different from the assumption. The cause may be the absence of a condition that defines it as an obligation. Thus, other factors that define it as part of the obligation or not should also be considered.

6 Conclusion

In addition to literature review, supported by results, it is signed that elements of internal marketing affect the satisfaction of employees of non-profit organizations in achieving personal excellence, and indirectly the high performance of the organization. A survey of a sample of 300 employees that lasted about 20 days proved that the elements of internal marketing have a positive effect on the motivation of employees of the organization.

Elements of internal marketing, whose impact was investigated, were grouped into financial and non-financial in order to obtain different results of the importance of each different element of internal marketing on employee motivation and satisfaction.

By confirming the hypothesis that loyalty affects employee motivation, it has been proven that longer-term employment motivates employees to personal development through additional education at professional seminars and writing professional papers. New technologies and innovations in the field of their work impose the need for development, and loyal employees are ready to continuously raise their knowledge to a higher level, which speaks in favor of their motivation and job satisfaction.

Employees in non-profit organizations are loyal to their jobs, they adore them, in a manner that present a vocation, So the financial factor, the amount of salary, is not crucial for motivation in work. This is just one guideline in researching motivational factors in healthcare. Even the strongest drivers of all motivation dimensions as nonfinancial human resource management tools were found out by Zemichael, Ejigu and, Weldegebreal [54]. We argue that these tools should be the focus of stakeholders of the healthcare workforce in order to attenuate problems regarding motivation. This is supported by the results of a survey according to which the hypothesis of the amount of salary as a motivating factor was refuted,

because most employees are not satisfied with the salary, but still do the job they love without the desire to change it.

Employee satisfaction at the workplace is also affected by other non-financial factors, and to prove the hypothesis we used data on the use of breaks during working hours, to which employees are entitled. The assumption was that younger employees who do not have the indefinite term contract period and still want to prove themselves at work. They will use the break less than their older colleagues. However, it turned out that all employees, regardless of the type of employment, equally (do not) use their right to a break, so the hypothesis was rejected. This may indicate dissatisfaction, but at the same time, it indicates greater motivation.

As the last indicator of motivation at work, we assumed that employees with a higher level of education have a greater desire for further professional development. However, as in the previous case, this hypothesis was rejected because it was shown that the presence of the desire for professional development, which is reflected in attendance at professional seminars and writing professional papers, is equal for employees of all levels of education.

The analysis of the obtained data proved, that in non-profit organizations the main role in internal marketing is played by non-financial elements, primarily the possibility of professional self-development, self-actualization on that manner, developing the excellence, which affects the satisfaction and motivation of all employees, regardless of their length of service and education. The desire to progress and master new innovative knowledge and skills are the main motivating factors in non-profit organizations.

The research touched on the topic of organizational climate within the organization, which can also play an important role in internal marketing. The component of organizational atmosphere has an effect on internal customers' attitudes and behavior (i.e., their satisfaction and commitment). It is tied to internal customers' creativity and productivity. Therefore, it is an essential factor of organizational performance. There is a lot of space for additional future research.

Supported by results, it is shown that co-created values in communication through the positive experiences in internal environment of the organization are empowered. As previously suggested, all values are co-created sharing resources as knowledge and skills as the most

powerful innovative tool to achieve an efficient business climate.

References:

- [1] C. Grönroos, What Can A Service Logic Offer Marketing Theory, The Service-Dominant Logic of Marketing: Dialog, Debate, and Directions, 2006.
- [2] E. Gummesson, "Quality, service-dominant logic and many-to-many marketing", TQM Journal, 20(2), 2008, pp143.
- [3] S. L. Vargo, and R. F. Lusch, "Evolving to a new dominant logic for marketing", Journal of Marketing, 68, 2004, pp1–21.
- [4] S. L. Vargo, and R. F. Lusch, "Service-dominant logic: continuing the evolution", Journal of the Academy of Marketing Science, vol. 36, 2008, pp1–10.
- [5] S. L. Vargo, and R. F. Lusch, "Service-dominant logic 2025", International Journal of Research in Marketing, 34(1), 2016, pp46–67.
- [6] S. L. Vargo, and F. W. Morgan, "An historical reexamination of the nature of exchange: The service-dominant perspective", Journal of Macromarketing, 25(1), 2005, pp42–53.
- [7] L. Walras, Elements of the Political Economy, Homestead, NJ: Ricgard. D. Irwin, 1894/1954.
- [8] R. L. Oliver, "Whence Consumer Loyalty?", Journal of Marketing, 63(4_suppl1), 1999, pp. 33–44.
- [9] I. Tomić, Z. Tešić, B. Kuzmanović, and M. Tomić, "An empirical study of employee loyalty, service quality, cost reduction and company performance", Economic research - Ekonomska istraživanja, 31(1), 2018, pp828.
- [10] J. van Doorn, et al. "Domo Arigato Mr. Roboto: Emergence of Automated Social Presence in Organizational Frontlines and Customers' Service Experiences", Journal of Service Research, vol. 20, no. 1, Feb. 2017, pp. 43–58.
- [11] I. Sanchez-Hernandez, and D. Grayson, "Internal marketing for engaging employees on the corporate responsibility journey", Intangible Capital, vol. 8, no. 2, 2012, pp275–307.
- [12] Đ. Ozretić Došen, O., Jurković Majić, Marketing usluga, Školska knjiga, 2014.
- [13] K. Žager, I. Mamić Sačer, S. Sever, and L. Žager, Analysis of Financial Statements, In Croatian, Masmedia, Zagreb, 2008.
- [14] S. Vig, K. Dumičić, "Impact of commitment to business ethics to nonfinancial business performance", Interdisciplinary Description of Complex Systems, 14, 2016, pp165–181.
- [15] L. K. Treviño, and K. A. Nelson, Managing business ethics, John Wiley & Sons, 2011.
- [16] J.A. Simmons, "Both sides now: Aligning external and internal branding for a socially responsible era", Marketing Intelligence & Planning, 27(5), 2009, pp681–697.
- [17] L. Synyayeva, D. Verba, A. Yachucs, I. Verkhovod, D. Aleksandrov. "Resources of Educational and Healthcare Industries and Population Welfare: Comparative Analysis in Post-socialist and OECD Countries", WSEAS Transactions on Business and Economics, Vol.18, 2020, pp. 531-542.
- [18] M. Sirgy, and D. J. Lee, "Well-being Marketing: An Ethical Business Philosophy for

- Consumer Goods Firms”, *Journal of Business Ethics*, 77, 2008, pp. 377–403.
- [19] L. L. Berry, “Big ideas in services marketing”, *Journal of Services Marketing*, 1 (1), 1987, pp5–10.
- [20] R. Varey, and B. Lewis, *Internal Marketing: Directions for Management*, Routledge, 2000, pp. 223–225.
- [21] M.Voynarenko, V. Dzhezdzhula, I. Yepifanova, “Modeling of the Process of Personnel Motivation for Innovation Activity”, *WSEAS Transactions on Business and Economics*, Vol. 17, 2020, pp :467-477.
- [22] I. Mihajlovic, L. Raguz, “Transformation of Business of Travel Intermediaries in Terms of Dynamic Changes in Macro environment Towards New Challenges”, *International Conference on Applied Mathematics & Computer Science (ICAMCS 2018)*, IEEE Computer Society Conference Publishing Services (CPS), 2018, pp77–86, DOI:10.1109/ICAMCS46079.2018.00014
- [23] Y. Dachev, I. Lazarov.”Impact of the Marine Environment on the Health and Efficiency of Seafarers”, *Wseas Transactions on Business and Ecomics*, Vol. 16, 2019, pp. 282 – 287.
- [24] L. L. Berry, “The employee as customers”, *Journal of Retail Banking*, 3, 1981, pp25–28.
- [25] W. George, “Internal marketing: concepts, measurement and application”, *Journal of Retailing*, 35 (3), 1990, pp85-98.
- [26] C. Grönroos, Christian, “Service Logic Revisited: Who Creates Value? And Who Co-creates?”, *European Business Review*. 20, 2008, pp298–314.
- [27] I. Papolomou, and D. Vrontis, “Using internal marketing to ignite the corporate brand: The case of the UK retail bank industry”, *Journal of Brand Management* 14, 2006, pp177–195.
- [28] G. Parker, J. McAdams, D. Zielinski, *Rewarding teams*, Jossey-Bass; 1st edition, 2000, pp21–25.
- [29] J. S. Oakland, *Total Quality Management*, Butterworth Heinemann, 2004, pp269.
- [30] E. A. Yi, and Y. J. Yi, “Influence of internal marketing perception, empowerment and job satisfaction on customer orientation of clinical nurses”, *Korean Journal of Occupational Health Nursing*, 21 (3), 2012, pp299–307.
- [31] Y. C. Chen, and S. Lin, “Modeling internal marketing and employee loyalty: A quantitative approach”, *Asian Social Science*, 9 (5) 99, 2013.
- [32] G. Bermúdez-González, I. Saşaki and D. Tous-Zamora, “Understanding the impact of internal marketing practices on both employees’ and managers’ organizational commitment in elderly care homes”, *Journal of Service Theory and Practice*, 26 (1), 2016, 28–49.
- [33] C. Y. Jeong & D. Lam, “Role of internal marketing on employees’ perceived job performance in an asian integrated resort”, *Journal of Hospitality Marketing & Management*, 25:5, 2016, pp589–612.
- [34] J. H. Han, and E. S. Ahn, “Effect of internal marketing activities on motivating dental hygienists”, *Korean Society of dental Hygiene Science*, 14 (1), 2014, pp43–50.
- [35] Y. T. Huang, and S. Rundle-Thiele, “The moderating effect of cultural congruence on the internal marketing practice and employee satisfaction relationship: An empirical examination of Australian and Taiwanese born tourism employees”, *Tourism Management*, 42, 2014, pp196–206.
- [36] H. W. Joung, B. K. Goh, L. Huffman, J. J. Yuan and J. Surles, “Investigating relationships between internal marketing practices and employee organizational commitment in the foodservice industry”, *International Journal of Contemporary Hospitality Management*, 27 (7), 2015, pp1618–1640.
- [37] S. Kim, and K. H. Chung, “The relationship among internal marketing, internal customer satisfaction, service quality, price, and external customer satisfaction: focused on wedding service”, *Korea Customer Satisfaction Management Association*, 16 (3), 2014, pp105–124.
- [38] S. I. Lim, *The effect of perceived internal marketing activities on the self-efficacy and job satisfaction on the customer-oriented attitudes among hospital nurses*, PhD Thesis, University of Chosun, 2014.
- [39] D. Bugandwa Mugu Akonkwa, “Internal marketing, employee job satisfaction, and perceived organizational performance in Microfinance institutions: empirical study from Kivu (DRC)”, 2015.
- [40] W. Alan, and J. Frimpong, “A conceptualization of the satisfaction-service performance”, *Journal of Services Marketing*, 18 (6), 2004, pp471–481.
- [41] E. B. Kanyurhi, and D. Bugandwa Mugu Akonkwa, “Internal marketing, employee job satisfaction, and perceived organizational performance in microfinance institutions”, *International Journal of Bank Marketing*, 34 (5), 2016.
- [42] T. Shahzad, and H. Naeem, “Role of internal marketing in employee engagement leading to job satisfaction of employees in private banks of Pakistan”, *IOSR Journal of Business and Management*, 8 (2), 2013, pp62–68.
- [43] K. Rae, “How perceptions of empowerment and commitment affect job satisfaction: a study of managerial-level effects”, *Accounting, Accountability & Performance*, 18 (1), 2013, pp35–62.
- [44] J. Wieseke, M. Ahearne, S. Lam and R. V. Dick, “The role of leaders in internal marketing”, *Journal of Marketing*, 73, 2009, pp123–145.
- [45] I. Djastuti, S. T. Rahardjo, L. Irviana, U. Udin, “Fun at Work and Employee Performance: The Roles of Job Satisfaction and Organizational Commitment in Manufacturing Companies”, *Wseas Transactions on Business and Economics*, Vol. 16, 2019, pp. 153-162.
- [46] T. C. Murray, W. M. Rodgers and S. N. Fraser, “Examining implementation intentions in an exercise intervention: the effects on adherence and self-efficacy in a naturalistic setting”, *Journal of Applied Social Psychology*, 39 (10), 2009, pp2303–2320.
- [47] D. P. Schneller, and E. Vandsburger, “Self-efficacious behaviors for reducing stress in older adulthood”, *Ageing International*, 32 (1), 2008, pp78–91.
- [48] D. Compeau, and C. Higgins, “Computer Self-Efficacy: Development of a Measure and Initial Test”, *MIS Quarterly*, 19(2), 1995, pp189–211.
- [49] S. H. Han, and B. C. Lee, “The impact of travel agency’s internal marketing on employee’s self-efficacy and organizational commitment”,

- Academic Society of Event and Convention Journal, 12 (2), 2016, pp43–62.
- [50] R. L. Carson, and M. A. Chase, “An examination of physical education teacher motivation from a self-determination theoretical framework”, *Physical Education and Sport Pedagogy*, 14 (4), 2009, pp.335–353.
- [51] R. Miller, and D. Siegmund, “Maximally Selected Chi Square Statistics.” *Biometrics*, vol. 38, no. 4, 1982, pp.1011–1016.
- [52] V. Bewick, L. Cheek, and J. Ball, “Statistics review 8: Qualitative data - tests of association”, *Crit Care*, 8, 2004, pp.46–53.
- [53] Streiner D. Chapter 3: Breaking up is hard to do: The heartbreak of dichotomizing continuous data. In: Streiner DA, editor. *Guide for the Statistically Perplexed*. Buffalo, NY: University of Toronto Press; 2013.
- [54] W. Zemichael, Y. Ejigu, F. Weldegebreal, M. Woldje, “Motivation of health workers and associated factors in public hospitals of West Amhara, Northwest Ethiopia”, *Patient Preference and Adherence*, 10, 2016, Doverpresss, Elsevier B.V.

Creative Commons Attribution License 4.0 (Attribution 4.0 International, CC BY 4.0)

This article is published under the terms of the Creative Commons Attribution License 4.0

https://creativecommons.org/licenses/by/4.0/deed.en_US