



Article

State Incentives and Sustainable Motivation System in the Health Sector

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Abstract: Now that the pandemic has entered the second phase, in which countries are adapting to the crisis, governments need to determine incentives that will contribute to the sustainability of the health system and human health. Regarding this, human resources are a significant factor, which affects the sustainability of any system, and it is important to establish a relevant motivation system that will withstand the challenges that society will face in the coming period. The aim of this paper is to analyse three dimensions of state incentives (employment program, COVID-19 bonus, training opportunities) and to examine their influence on healthcare workers' motivation and the sustainability of the health system in the Republic of Serbia. The empirical research was conducted on a sample of 207 respondents employed in the tertiary level of healthcare. Data analysis included exploratory factor analysis (EFA), confirmatory factor analysis (CFA) and structural equation modelling (SEM). The research results confirmed the existence of all three incentives and indicated that state incentive "training opportunities" has the strongest effect on the motivation of health workers and the sustainability of the healthcare system.

Keywords: coronavirus; healthcare sector; incentives; human resources; motivation; sustainable system; human health



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1. Introduction

The coronavirus pandemic that has affected humanity has created the strongest impact on health sectors both economically and organizationally. Since the coronavirus outbreak in Europe, the academic attention has been focused on the functioning of healthcare sectors and their efficiency in different countries. The first wave of COVID-19 pointed to many problems in the health systems across the European Union and the Western Balkans, which have struggled challenges in terms of financing and providing services, even before the pandemic broke out. This is due to weaknesses related to equipment, materials, and human resources.

Universal access to healthcare services is considered as a basic need for both individuals and society and presents one of the common values and principles of EU health systems. Healthcare systems are organized and financed in different ways. To indicate how the health system responds to the challenges of universal access to health services, relevant statistical data on healthcare expenditures and financing can be applied [1].

Financial indicators are used to monitor the healthcare systems as well as to compare them among different countries [2]. One of the most used indicators is the share of healthcare expenditure in GDP.

According to Eurostat data, healthcare expenditures in the European Union averaged 9.9% of GDP in 2018. Among the EU member states, the largest share of health expenditures was recorded in Germany with 11.5% of GDP, France with 11.3%, and Sweden with a share of 10.9% of GDP. In contrast, the lowest share of health expenditures was recorded in Luxembourg with only 5.3% of GDP and Romania with 5.6%. In relation to population size, the highest healthcare expenditures were recorded in Denmark, i.e., 5260 euros per capita, Luxembourg 5220 and Sweden 5040 euros in 2018, while the lowest were in Romania, 580 euros and Bulgaria 590 euros per capita [1].

The Republic of Serbia cannot compete with European developed countries in terms of health care organisation, health expenditures per capita, or quality control of services and products. However, the World Bank analysis shows that Serbia records higher healthcare expenditures as a share of GDP than many countries in the region (Bulgaria, Hungary, Croatia and Romania), which indicates that according to this criterion it does not lag far behind the most developed countries, such as Austria, the Netherlands, Italy and Finland [3]. This is supported by the fact that before the outbreak of the pandemic, the Republic of Serbia was well ranked on the international list of health security and related capabilities across the 195 countries (Global Health Security Index) [4], which was demonstrated by providing a quick and aggressive response to the pandemic, by applying appropriate health measures during the first wave.

Now that the pandemic has entered the second phase, in which countries are adapting to the crisis, governments need to determine incentives that will contribute to the sustainability of the health systems and human health. Regarding that, human resources are a significant factor, which affects the sustainability of any system, it is important to establish a relevant motivation system that will withstand the challenges that society will face in the coming period.

A literature review indicated that many empirical studies of healthcare management have focused on funding issues [2,5,6], as well as health sector reform in various countries [7–13]. In addition, there is a number of studies related to the motivation of healthcare workers before the pandemic outbreak [10,14–18]. However, it can be noticed that there is a lack of research focused on the motivation of health workers during the crisis caused by COVID-19, as well as systemic solutions to improve motivation, which is of great importance particularly if we take into account the fact that healthcare workers are in the first line of defence against the disease. Therefore, the aim of this paper was to analyse three dimensions of state incentives (employment program, COVID-19 bonus, training opportunities) and to examine their influence on health workers' motivation and the sustainability of the health system in the Republic of Serbia. Regarding that the tertiary level of health care includes specialized institutions and hospitals, the attitudes of their staff are of great importance for the improvement of state incentives provided by the state.

The results of this research can contribute to the creators of healthcare policy in designing a better motivational system, which affects the sustainability of the healthcare system, especially in times of pandemic crisis.

2. Literature Review and Theoretical Framework

In the scientific literature, there is a great number of studies that deal with the problem of work motivation. Many authors [19–21] believe that motivation is a complex psychological process of inner feeling or stimulation. The process of motivation is influenced by a number of factors, both external and internal [19,22], such as: personality traits, characteristics of the work performed by an individual, management style, organizational culture, etc. Motivational factors include the job itself, advancement and responsibility. These factors are related to an individual's positive feeling about the job, achievement, recognition and responsibility.

When researching the influence of the human factor on business success, theories of motivation emerged in the 1950s and 1960s. The focus of these theories is the process conditioned by cognitive and behavioural mechanisms that drive employees to make an effort to get the job done.

The most important theories for this research are the analysis of Maslow's hierarchy of needs and Herzberg's two-factor theory, which both belong to the group of content theories of motivation. Abraham Maslow found that people in organizations are driven by five groups of needs: physiological needs (needs that each individual has as a human being), safety needs (needs related to existential security, physical security, etc.), belonging and love needs (needs arising from the fact that a human is a social being and has a need to be accepted and loved by the collective, group), esteem needs and the need for self-actualization (needs related to person's aspiration to succeed in what he does, to realize abilities, talents and knowledge he carries within itself). According to Maslow's theory, in order to satisfy the needs of a higher order (needs of love and belonging, needs of esteem and needs of self-actualization, i.e., progress), it is necessary to satisfy basic needs such as physiological and safety needs [23]. In other words, if a person has not satisfied the basic physiological need that he has as a human being, as well as his existence, he will not focus on satisfying another type of need. Frederick Herzberg, in the two-factor theory of motivation, lists two types of factors that influence the behaviour of people in the organization: hygienic factors and motivators. He believed that motivation factors (achievement, recognition, advancement, growth, work itself) lead to the presence or absence of employee satisfaction. In the same way, hygienic factors (salary, working conditions, company policy and procedures, relationship with the manager, job security, and interpersonal relationships) affect the presence or absence of dissatisfaction [24]. In the context of this theory, the conclusion is that dissatisfied employees will have low productivity, while satisfied employees will have greater efficiency and commitment to work [25]. In this regard, Latham (2012) considers that the relationship between work achievement and satisfaction is a reciprocally conditioned process, and that satisfaction can be both a cause and a consequence [26].

It is beyond doubt that people in organizations have a key role to play in achieving sustainable business. Business success also depends on human potential and motivation. Considering that employee motivation and satisfaction directly affect effectiveness, the employee motivation process should be directed towards the realization of organizational goals, while the motivation system should be focused on optimal employee engagement taking into account their needs. The motivation system should be designed to meet the economic and psychological needs of employees and should encourage employee motivation in the direction of performing work tasks [27]. A sustainable motivation system implies a model of constant change through the improvement of motivational policies, strategies and procedures for enhancing the level of motivation and performance [28].

In order to increase motivation, rewards must be meaningful, useful and valued. They can be in the form of intangible and tangible rewards, in fixed or variable amounts [29]. Material rewards are those that relate to salary increases, bonuses for effective and overtime work, benefits and other forms that can be materially expressed, as the equivalent of work activities. Intangible rewards include: job challenge, respect, status in the organization, opportunities for growth and development of an individual, investment in upgrading skills, chances for progress in the team, etc. Material rewards are significant and can meet the needs of employees up to a certain level, especially those with lower incomes. However, in the long run, relying solely on material rewards will not lead to significantly higher levels of employee motivation. Full commitment and dedication of employees to the task requires the implementation of intangible incentives as well. Intangible rewards enable the satisfaction of employees' needs for more efficient growth and self-actualization [30], and they have a higher relevance for employee motivation [31]. In accordance with these findings an effective motivational system should represent the optimal combination of financial and non-financial rewards [32].

Healthcare is currently the highest priority. In the context of strengthening the healthcare system, the motivation of workers is one of the driving forces that can potentially contribute to progress in achieving the healthcare goals [17]. In other words, the effectiveness of the health sector depends on the motivation of healthcare workers [10]. The importance of investing in the motivation of health workforce was also confirmed in the report of the Global Conference on Primary Health Care [33].

Regarding that motivational system in the healthcare sector differs from other industries due to the sector specifics and the nature of work, research on factors related to motivation is of great importance for the sustainability of the healthcare system. In addition, cultural differences can affect different interpretations of reward systems, considering that the values that affect their meaning may differ between cultures [29]. When choosing motivational factors, the patterns of cultural differences that predict motivational preferences must be taken into account [34] since the motivational needs of employees from different countries are not the same, despite the fact that they may be regionally close. Research indicates that significant differences in motivational needs have been identified in different countries [35].

Employees in the healthcare sector face many challenges, particularly in the time of the COVID-19 outbreak. Medical staff suffer from high levels of stress, further aggravated by the constant updating of protocols in attempts to combat the virus [36]. Poor working conditions, inadequate management, lack of professional staff, limited equipment, lack of training, as well as "burnout" are aggravating circumstances that can contribute to a low level of motivation. Furthermore, low employee motivation implies poor quality of healthcare service, increased risk of illness of healthcare staff during the pandemic, and absence from work, which necessarily reflects on the sustainability of the healthcare system. The stated problems most often lead to the economic migration of staff, which is of great relevance, regarding the fact that staff shortages are a growing phenomenon that affects the functioning of health systems and the quality of healthcare service [17]. Migration and labour shortages make health systems "sensitive", especially in the time of pandemic.

In this regard, the Ministry of Finance of the Republic of Serbia, within the Economic Measures to Assist the Economy and Citizens [37], proposed incentive measures for the healthcare sector related to the employment program, one-time financial assistance, salary increase, training opportunities and COVID-19 bonuses in order to enhance the quality of healthcare services and the sustainability of the system.

3. Materials and Methods

The primary goal of this research was to analyse the structure of state incentive dimensions (employment program, COVID-19 bonus and training opportunities) and their effect on healthcare workers' motivation and the sustainability of the health system in the Republic of Serbia. From the primary goal, the following two specific goals were derived:

- Specific goal 1: To verify the existence of three dimensions of state incentives: employment program, COVID-19 bonus and training opportunities.
- Specific goal 2: To analyse the effect of each dimension of state incentives on healthcare workers' motivation and the sustainability of healthcare system and to determine which dimension has the strongest impact on these variables.

The structured questionnaire was distributed to healthcare workers in specialized institutions of the tertiary healthcare level in the Republic of Serbia. The empirical research was conducted in August 2021, on a convenient sample of 250 respondents, who were working in the following positions: medical staff, head of medical staff, trainee, specialist head of department and director of clinic. The convenient sample, although considered unrepresentative, is often used in economic and, in general, in scientific research, and is based on the recruitment of available or procurable members of the population [38]. However, 43 questionnaires were not completed, and the sample consisted of 207 respondents. The sample included 207 respondents of different age, education, employment, length of work experience and position in the tertiary level of health care, which was presented in Table 1.

Table 1. Profile of survey respondents ($n = 207$).

Variables	Percent (%)
Gender	
Female	63.8
Male	36.2
Age	
Up to 24	18.4
25–54	59.9
≥55	21.7
Education level	
High school	27.1
Bachelor	49.8
Master	3.4
Doctoral	19.8
Employment	
Full-time	51.2
Part-time	48.8
Working experience	
Up to 5 years	36.7
6–10 years	10.6
11–15 years	28.5
Over 15 years	24.2
Working position	
Medical staff	30.4
Head of medical staff	10.1
Trainee	26.6
Specialist	26.6
Head of Department	6.3

Table 1 indicates that 63.8% of respondents were women, while 36.2% of respondents were men. Respondents aged between 25 and 54 years (59.9%) and those with a bachelor's degree (49.8%) prevailed in the sample. When it comes to employment, a slightly higher percentage of respondents (51.2%) were full-time employed, compared to 48.8% of respondents who were part-time employed. Most respondents (36.7%) had up to 5 years of work experience. Regarding the working position in the organization, the medical staff (30.4%) prevailed in the sample.

The structured questionnaire was composed of two parts. The first part referred to the socio-demographic characteristics of the respondents, while the second part related to the state incentive dimensions, healthcare workers' motivation and the sustainability of healthcare system. The second part included three dimensions: employment program, COVID-19 bonus and training opportunities, with a total of 21 statements. Likert-five-point scale was used in measuring the respondents' attitudes, which ranged from 1 ("the lowest level of motivation") to 5 ("the highest level of motivation").

The analysis of collected data started with an exploratory factor analysis (EFA), which was first used to determine the dimensionality of state incentive structure, and then a confirmatory factor analysis (CFA) was applied to examine whether the proposed solution was acceptable (dimensionality and factor-loading pattern fit of the model). In the next step, structural equation modelling (SEM) was used to determine which dimension of state incentives had the greatest impact on the motivation of healthcare workers and the sustainability of the health system. Data were processed using SPSS 21.0 and AMOS 21.0 statistical packages.

4. Results

To check the dimensionality, validity, and reliability of three state incentive dimensions (employment program, COVID-19 bonus, training opportunities), exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) were conducted. Employment program,

as first dimension of state incentives, was measured by four items. COVID-19 bonus, as second dimension of state incentives, was measured by eleven items, while training opportunities, as third dimension of state incentives was measured by six items (Table 2).

Table 2. Dimensions and items of state incentives.

Dimensions	Items
EMPLOYMENT: Employment program	I am motivated by engaging in a permanent employment relationship (EMPLOY1) I am motivated by engaging on fixed-term (EMPLOY2) I am motivated by occasional engagement by other institutions (EMPLOY3) I am motivated by the possibility of employment in another institution (EMPLOY4)
BONUS: COVID-19 bonus	I am motivated by a one-time financial aid in the amount of 100 euros in dinar equivalent (BONUS1) I am motivated by a one-time financial aid in the amount of 200 euros in dinar equivalent (BONUS2) I am motivated by a one-time financial aid in the amount of 300 euros in dinar equivalent (BONUS3) I am motivated by a one-time financial aid in the amount of more than 300 euros in dinar equivalent (BONUS4) I am motivated by a 10% salary increase (BONUS5) I am motivated by a 20% salary increase (BONUS6) I am motivated by a 30% salary increase (BONUS7) I am motivated by a salary increase of more than 30% (BONUS8) I am motivated by material rewards for additional work (BONUS9) I am motivated by material rewards in the form of discounts on travel arrangements (BONUS10) I am motivated by material rewards in the form of discounts on plane tickets (BONUS11)
TRAINING: Training opportunities	I am motivated by the possibility of specialization (TRAINING1) I am motivated by the possibility of additional training (TRAINING2) I am motivated by free (paid) online seminars (TRAINING3) I am motivated by free (paid) online conferences (TRAINING4) I am motivated by public recognition from my work (TRAINING5) I am motivated by the possibility of progress (TRAINING6)

To check the dimensionality of scale, first, an exploratory factor analysis (EFA) was conducted, considering 21 items, which measured state incentives, and then a confirmatory factor analysis, to confirm the factor structure. The Kaiser criterion was selected for factor extraction, according to which a factor with a characteristic root greater than one or “1” is selected as the default acceptable level for determining the factor [39].

Prior to these analyses, the necessary assumptions were performed, and the dataset was examined for possible univariate and multivariate deviations. The analysis of standardized results showed that there were no univariate outliers. However, a comparison between the multiple regression values of the Mahalanobis distance and the chi-square table of critical values showed that there were multivariate outliers. Results with degree of freedom 21 at the level of $p < 0.001$ showed that two cases have a chi-square $\chi^2 = 48,795$ or more and fall into the category of multivariate deviations and are therefore excluded from the analysis [39] (p. 952). Consequently, the sample size for subsequent analysis was reduced to 205 respondents.

To ensure data factorability, the KMO sampling adequacy test and the Bartlett’s Test of Sphericity were performed. The Kaiser–Meyer–Olkin (KMO) test is a measure of the adaptation of data to factor analysis. The test measures the adequacy of sampling for each variable in the model and for the whole model, taking values between 0 and 1, while values greater than 0.60 are considered acceptable (Kaiser, an index of factorial simplicity, 1974). The statistical criteria are met, in this case, Kaiser–Meyer–Olkin (KMO) is 0.645. Bartlett’s test of sphericity, which measures the correlation matrix with the identity matrix, was statistically significant ($\chi^2 (45) = 2187.17, p < 0.001$). This section may be divided

by subheadings. It should provide a concise and precise description of the experimental results, their interpretation, as well as the experimental conclusions that can be drawn.

In exploratory factor analysis, using promax rotation, three factors (dimensions) with an eigen value of greater than 1 were discovered. Based on the results of initial EFA, there were 11 multiple items, which saturated more than one factor. After deleting the multiple items, EFA gave a solution of three factors, which made up 10 items (Table 3), with the total variance explained as 82.31%. Based on the results shown in Table 3, the factor loadings are large enough (>0.50) and range from 0.705 to 0.906 for the first factor (employment program), 0.843 to 0.954 for the second factor (COVID-19 bonus), 0.706 to 0.975 for the third factor (training opportunities).

Table 3. Percentage of variances, eigenvalues and factor loadings of state incentive dimensions and items.

Dimensions	Items	Eigen Value	% of Variance	Factor Loading
Employment program	EMPLOY2	1.368	13.682	0.705
	EMPLOY3			0.835
	EMPLOY4			0.906
COVID-19 bonus	BONUS1	2.918	29.177	0.954
	BONUS2			0.843
	BONUS5			0.896
Training opportunities	OPPORT1	3.945	39.455	0.975
	OPPORT2			0.958
	OPPORT4			0.706
	OPPORT6			0.910

In order to examine the convergent and discriminant validity of the three-factor solution, a confirmatory factor analysis (CFA) was conducted. Model fitting indices, estimated through the maximum likelihood approach, were compared and interpreted according to recommended limit values, within acceptable ranges in the literature [40]. Fit indices, for a three-factor measurement model, support good fit without any modifications, $\chi^2 = 105.760$, $df = 32$, $p < 0.001$; $\chi^2/df = 3.305$, NFI = 0.971, GFI = 0.952, TLI = 0.984, CFI = 0.981, RMSEA = 0.052.

A value of $\chi^2/df \leq 5$ is considered acceptable on samples larger than 200 [41]. For a model that has a CFI and TLI above 0.95, an RMSEA of less than 0.08, GFI and NFI above 0.9 is considered to fit the data well [42]. Therefore, the model of CFA presented in Figure 1 is a measurement model that indicated the structure of state incentives. In Figure 1, each observed variable (EMPL2, EMPL3, EMPL4, BONUS1, BONUS2, BONUS5, TRAINING1, TRAINING2, TRAINING4, TRAINING6) has an error term (e1-e10), which reflect their adequacy in measuring the related underlying factors (EMPLOYMENT PROGRAM, COVID-19 BONUS, TRAINING OPPORTUNITIES). All factor loadings of the three dimensions ranged from 0.58 to 1.01. Factor loadings exceeded the desirable standard of 0.50 [39].

In order to assess the reliability of the measuring instrument, Cronbach's α (CA) and composite reliability (CR) were used (Table 4). For both CA and CR, values greater than 0.70 are considered acceptable [40,43]. Cronbach's alpha was 0.790 for the first factor (employment program), 0.875 for the second (COVID-19 bonus), 0.918 for the third factor (training opportunities), respectively. These results indicate that the measuring scale of state incentives, consisting of three factors and 10 statements, is reliable due to its high internal consistency in all observed variables and their corresponding latent variables. Convergent validity was also assessed using the average variance extracted (AVE). Values of AVE ranged from 0.672 to 0.808, which is above the threshold of 0.50 [44] (Table 4). The square root of AVE was calculated for the discriminant validity test. As the second root of the average extracted variance for each construct is greater than its correlation with the other two constructs, the discriminant validity was confirmed (Table 4). Based on

the results presented in the measurement model, it can be concluded that there are good psychometric characteristics of latent constructs in the model.

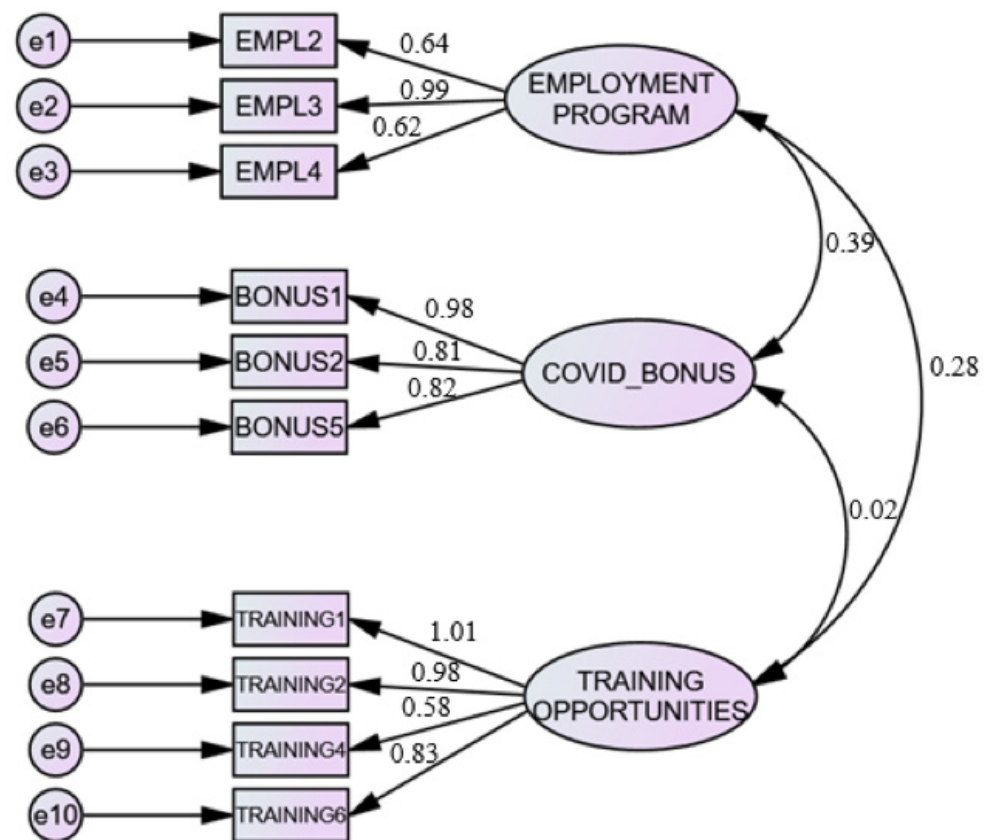


Figure 1. Confirmatory factor analysis.

Table 4. Results of reliability, convergent and discriminant validity testing.

Dimensions (Factors)	CA	CR	AVE	Employment Program	COVID-19 Bonus	Training Opportunities
Employment program	0.790	0.859	0.672	0.820		
COVID-19 bonus	0.875	0.926	0.808	0.252	0.899	
Training opportunities	0.918	0.940	0.799	0.388	0.060	0.893

Based on these findings, the existence of three dimensions of state incentives can be confirmed, which is also the answer to the first research question.

Figure 2 presents the results of the second-order factorial structure for motivation of health workers and the sustainability of the healthcare system. Each observed variable (EMPL2, EMPL3, EMPL4, BONUS1, BONUS2, BONUS5, TRAINING1, TRAINING2, TRAINING4, TRAINING6) has an error term (e1-e10), and all exogenous factors (Employment program, COVID-19 bonus, Training opportunities) have residual errors (e11-e13), which represent errors in prediction of endogenous factor (motivation of health workers and the sustainability of the health system) from exogenous factors. The path coefficients for motivation of healthcare workers and the sustainability of healthcare system varied among three dimensions: employment program (0.38), COVID-19 bonus (0.16) and training opportunities (0.52). It can be concluded that training opportunities as dimension of state incentives has the greatest, statistically significant ($p < 0.001$) effect on motivation of health workers and the sustainability of the healthcare system. This is the answer to the second research goal.

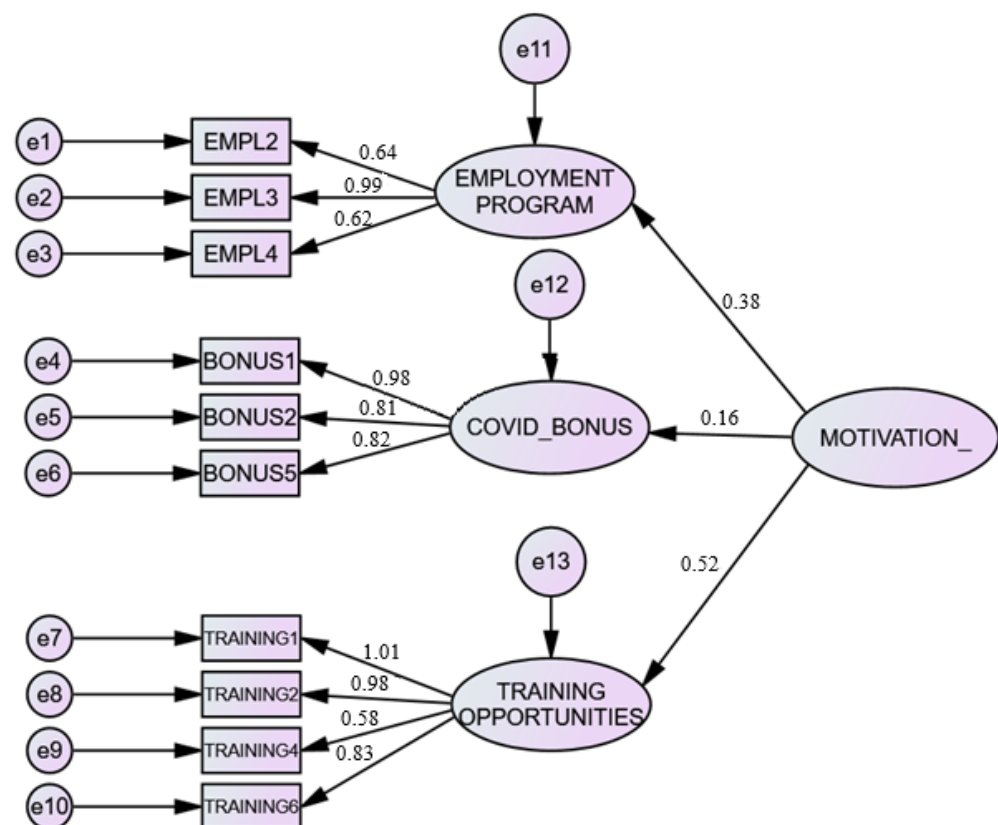


Figure 2. Confirmatory factor analysis—second-order measurement model for motivation of health workers and the sustainability of the health system.

5. Discussion

Considering the challenges facing the healthcare sector, especially when it comes to the COVID-19 crisis, incentives that lead to increased employee motivation are significant. Achieving satisfied and motivated healthcare workers is currently one of the most complex and important tasks that many governments need to confront. Retaining employees in these organizations is extremely difficult due to specific nature of the job as well as the risks that employees face. Therefore, the motivation system should be designed to satisfy certain types of behaviour, attract new and retain existing employees, contribute to the sustainability of the healthcare system, and preserve human health. Furthermore, the motivation system should ensure the identification with the organization and a certain level of employee commitment.

The response to COVID-19 is a challenge for the public sector and the public health system, which must propose and implement mandatory, flexible and innovative working methods and measures to protect employees and society as a whole [45]. Furthermore, the need to provide incentives for health workers to increase their performance is urgent, as health systems in most countries are severely affected by the global financial crisis. Reducing the number of health workers along with the lack of material and technological equipment limits the efficiency and effectiveness of health facilities [46].

To overcome the problems related to the sustainability of healthcare system, the Ministry of Finance of the Republic of Serbia adopted a package of state incentives [37] to help the population and the economy. In addition, the Ministry of Health has defined the Master Plan for the new health system until 2035, with the aim of ensuring better quality of healthcare system, the accessibility and efficiency of healthcare services and the economic efficiency of health budget [47].

Due to the specificity of healthcare industry as well as the services provided by these institutions, the motivational factors in the health sector are significantly different

from the motivation of employees in other industries and can hardly be compared. That is to say, medical workers need a different kind of incentive [31,48,49]. In this regard, the work motivation in healthcare has higher significance than in other public service sectors [50]. Therefore, the following discussion will be based on comparisons of research results exclusively in the health sector, referring to the health systems of different countries.

Morishita et al. (2021) have examined the effects of incentives for healthcare workers in relation to wearing protective equipment when treating coronavirus patients in Japan. Their findings showed that 88.5% of healthcare workers from the sample considered financial incentives as an important motivation factor [51]. The study conducted by Almaghrabi et al. (2020) which included 1036 healthcare workers who were dealing with the COVID-19 pandemic in Saudi Arabia, indicated that 89.3% participants recognised the need for incentives and financial support for family members [52]. Another study from the Middle East emphasized the significance of nonfinancial incentives such as wellbeing programs for preserving the mental health of workers in health systems during the pandemic [53]. These findings are in relation to previous studies dealing with the psychological wellbeing of healthcare workers who were on the first line of defence against COVID-19 [54–56].

Mitsakis (2019) considers that human resource development helps an organization's resilience during the crisis [57] because it raises the level of motivation. Muthuri et al. (2020) concluded that training is one of the most important motivating factors among health professionals. The results of this study indicated demotivating factors that lead to a high workload of healthcare workers, which include a lack of respect, lack of recognition, and lack of qualified healthcare workers [17]. This implies that intangible factors, such as achieving goals, professional development and professional recognition have a longer-term effect on motivation in healthcare, especially in physicians [31]. Similar results were obtained by Polish researchers. The findings indicate that among various aspects of work, the main motivating factors that lead to job satisfaction in public hospitals are quality of work, social status, respect, recognition, and autonomy in work. Performance feedback from management is a motivating factor that permanently affects the attitude towards work, not only to increase satisfaction, but also to improve organizational performance [50]. In this regard, the conclusion of Greek researchers is that the level of satisfaction of health workers in terms of recognition and achievement can be improved, because most respondents claimed that they were moderate to very satisfied with the importance of their work, as well as the level of respect. In addition, a large part of the participants stated to have moderate to significant satisfaction from the recognition of their work achievement. However, the majority of respondents believe that there are no adequate opportunities for personal growth and development [46] which corresponds to the fact that the Greek health system is in crisis.

In contrast, the findings of a study conducted by Chinese researchers [18,58], indicated that more attention should be paid to the factors that increase the income of healthcare workers. Similar conclusions were made by Greek researchers. The main motivating factors that contribute to increased satisfaction in the Greek public health sector are salaries and wages. This attitude of employees in the health sector is additionally caused by the pathogenesis of the Greek health system, the economic crisis, as well as the reduction of health care expenditures, which led to a reduction in staff salaries, and non-payment of various benefits in this profession [46].

Furthermore, Shah et al. (2016) consider that inadequate financial compensation, poor working environment, lack of medical equipment and materials, interference of the local politicians and powerful people in the work of healthcare institution, can affect the lack of motivation of healthcare workers. The result of this research indicates that doctors were dissatisfied with the stimulus programs in Pakistan [16]. Likewise, researchers from Ghana came to the conclusion that material factors are crucial for retaining health personnel and increasing levels of motivation. In addition, intangible factors such as leadership style, the possibility of professional development and the availability of resources are predictors of motivation and retention [59]. The presented dissimilarities in research findings

regarding the motivation of healthcare workers indicate the differences between developed and underdeveloped countries, but also the contextual differences in understanding the motivation in different cultures.

For comparison with our research, the most relevant are the studies from the Western Balkans. Researchers from Bosnia discussed tangible and intangible motivation strategies on a sample of 79 employees in the healthcare sector. The results of this research indicated that material motivators are the basis of the motivational system, but that intangible motivators also have a significant role [32]. Similar results were obtained by authors from Serbia Malesic, N., Mavrak, M., & Rustempasic, N. (2013), who indicate that both material and intangible motivators affect the motivation of healthcare workers [60].

This study has implications for future empirical endeavours. Similar studies could be conducted on larger samples, from other countries, given that the reward system and motivation effects may vary in different cultures.

6. Conclusions

The research results confirm the existence of three dimensions of state incentives, where the dimension, "training opportunities", has the greatest effect on the motivation of healthcare workers and the sustainability of healthcare system. These findings are in accordance with the fact that intangible incentives have a longer-term effect on employee motivation compared to material incentives.

The creation of adequate motivation system, as well as the application of an appropriate program of incentives, provide better efficiency and quality of healthcare services, but also enhance the retention of existing or attracting new staff, which is difficult to achieve in the public healthcare sector, especially during the pandemic.

This paper provides guidance to health policy makers to identify and implement incentives for the sustainability of healthcare system. The limitation of this study is related to the fact that it was conducted only at the level of tertiary healthcare. Further research should include the primary and secondary level of healthcare in order to create an adequate motivation system that will contribute to better quality of all healthcare services, sustainability of the healthcare system and preserving human health in general.

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References

1. Eurostat. Healthcare Expenditure Across the EU: 10% of GDP. Available online: <https://ec.europa.eu/eurostat/web/products-eurostat-news/-/ddn-20201202-1> (accessed on 14 August 2021).
2. Šahman-Zaimović, M.; Salihbegović-Šahman, S.; Zver, E. Analysis of the funding sources of health systems in the ex-Yugoslavia countries. *Med. Časopis* **2018**, *52*, 39–55. [CrossRef]
3. The World Bank. Current Health Expenditure (% of GDP) Serbia. Available online: <https://data.worldbank.org/indicator/SH.XPD.CHEX.GD.ZS?locations=RS> (accessed on 15 August 2021).
4. Global Health Security Index. 2019 GHS Index Country Profile for Serbia. Available online: <https://www.ghsindex.org/wp-content/uploads/2019/08/Serbia.pdf> (accessed on 15 August 2021).

5. Piroozi, B.; Moradi, G.; Nouri, B.; Bolbanabad, A.M.; Safari, H. Catastrophic health expenditure after the implementation of health sector evolution plan: A case study in the west of Iran. *Int. J. Health Policy Manag.* **2016**, *5*, 417. [CrossRef]
6. Souliotis, K.; Golna, C.; Tountas, Y.; Siskou, O.; Kaitelidou, D.; Liaropoulos, L. Informal payments in the Greek health sector amid the financial crisis: Old habits die last. *Eur. J. Health Econ.* **2016**, *17*, 159–170. [CrossRef] [PubMed]
7. Jeppsson, A.; Okuonzi, S.A. Vertical or holistic decentralization of the health sector? Experiences from Zambia and Uganda. *Int. J. Health Plan. Manag.* **2000**, *15*, 273–289. [CrossRef] [PubMed]
8. Bloom, G.; Xingyuan, G. Health sector reform: Lessons from China. *Soc. Sci. Med.* **1997**, *45*, 351–360. [CrossRef]
9. Cassels, A. Health sector reform: Key issues in less developed countries. *J. Int. Dev.* **1995**, *7*, 329–347. [CrossRef] [PubMed]
10. Franco, L.M.; Bennett, S.; Kanfer, R. Health sector reform and public sector health worker motivation: A conceptual framework. *Soc. Sci. Med.* **2002**, *54*, 1255–1266. [CrossRef]
11. Clark, M.A. *Health Sector Reform in Costa Rica: Reinforcing a Public System*; Woodrow Wilson Center Workshops on the Politics of Education and Health Reforms: Washington, DC, USA, 2002.
12. Collins, C.; Green, A.; Hunter, D. Health sector reform and the interpretation of policy context. *Health Policy* **1999**, *47*, 69–83. [CrossRef]
13. Islam, A. Health sector reform in Pakistan: Future directions. *J. Pak. Med. Assoc.* **2002**, *52*, 174.
14. Berdud, M.; Cabasés, J.M.; Nieto, J. Incentives and intrinsic motivation in healthcare. *Gac. Sanit.* **2016**, *30*, 408–414. [CrossRef]
15. Tzeng, H.M. The influence of nurses' working motivation and job satisfaction on intention to quit: An empirical investigation in Taiwan. *Int. J. Nurs. Stud.* **2002**, *39*, 867–878. [CrossRef]
16. Shah, S.M.; Zaidi, S.; Ahmed, J.; Rehman, S.U. Motivation and retention of physicians in primary healthcare facilities: A qualitative study from Abbottabad, Pakistan. *Int. J. Health Policy Manag.* **2016**, *5*, 467. [CrossRef]
17. Muthuri, R.N.D.K.; Senkubuge, F.; Hongoro, C. Determinants of motivation among healthcare workers in the East African Community between 2009–2019: A systematic review. *Healthcare* **2020**, *8*, 164. [CrossRef] [PubMed]
18. Millar, R.; Chen, Y.; Wang, M.; Fang, L.; Liu, J.; Xuan, Z.; Li, G. It's all about the money? A qualitative study of healthcare worker motivation in urban China. *Int. J. Equity Health* **2017**, *16*, 1–9. [CrossRef] [PubMed]
19. Latham, G.P.; Ernst, C.T. Keys to motivating tomorrow's workforce. *Hum. Resour. Manag. Rev.* **2006**, *16*, 181–198. [CrossRef]
20. Meyer, J.P.; Becker, T.E.; Vandenberghe, C. Employee commitment and motivation: A conceptual analysis and integrative model. *J. Appl. Psychol.* **2004**, *89*, 991. [CrossRef]
21. Tella, A.; Ayeni, C.O.; Popoola, S.O. Work Motivation, Job Satisfaction, and Organisational Commitment of Library Personnel in Academic and Research Libraries in Oyo State, Nigeria. *Libr. Philos. Pract.* **2007**, *9*, 1–6. Available online: <https://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1118&context=libphilprac> (accessed on 28 August 2021).
22. Korzynski, P. Employee motivation in new working environment. *Int. J. Acad. Res.* **2013**, *5*, 184–188. [CrossRef]
23. Maslow, A.H. A theory of human motivation. *Psychol. Rev.* **1943**, *50*, 370. [CrossRef]
24. Herzberg, F. *One More Time: How Do You Motivate Employees?* Harvard Business Review Press: Watertown, MA, USA, 2008.
25. Lekić, S.; Bogetić, S.; Vidas-Bujanja, M. Educated and satisfied worker: Foundation of modern and successful company. *J. Eng. Manag. Compet. (JEMC)* **2014**, *4*, 27–33.
26. Latham, G.P. *Work Motivation: History, Theory, Research, and Practice*; Sage: Thousand Oaks, CA, USA, 2012.
27. Lorincová, S.; Štarchoň, P.; Weberová, D.; Hitka, M.; Lipoldová, M. Employee motivation as a tool to achieve sustainability of business processes. *Sustainability* **2019**, *11*, 3509. [CrossRef]
28. Kovačević, M.; Blagojević, S.; Kuzmanović, B. Sustainability of the motivation policy model for employees in state administration. *Sustainability* **2020**, *12*, 7974. [CrossRef]
29. Van Eerde, W. *Motivation and Reward Systems*; Wiley Encyclopedia of Management: Hoboken, NJ, USA, 2015; pp. 1–4.
30. Robescu, O.; Iancu, A.G. The effects of motivation on employees performance in organizations. *Valahian J. Econ. Stud.* **2016**, *7*, 49–56. [CrossRef]
31. Tsounis, A.; Bamidis, P.D.; Sarafis, P. Motivation among physicians in Greek public health-care sector. *Br. J. Med. Med. Res.* **2014**, *4*, 1094–1105. [CrossRef]
32. Papac, N.; Pejanović-Škobić, N.; Lesko Bošnjak, L. Non-material motivation strategies of health sector. *Zbornik. Radova Ekonomskog. Fakulteta. Sveučilišta u Mostaru.* **2020**, *26*, 165–182.
33. World Health Organization & United Nations Children's Fund (UNICEF). In Proceedings of the Report of Global Conference on Primary Health Care: From Alma-Ata towards Universal Health Coverage and the Sustainable Development Goals, Astana, Kazakhstan, 25–26 October 2018.
34. Hitka, M.; Rózsa, Z.; Potkány, M.; Ližbetinová, L. Factors forming employee motivation influenced by regional and age-related differences. *J. Bus. Econ. Manag.* **2019**, *20*, 674–693. [CrossRef]
35. Hitka, M.; Balážová, Ž.; Gražulis, V.; Lejskova, P. Differences in employee motivation in selected countries of CEE (Slovakia, Lithuania and the Czech Republic). *Eng. Econ.* **2018**, *29*, 536–547.
36. Salas-Vallina, A.; Ferrer-Franco, A.; Herrera, J. Fostering the healthcare workforce during the COVID-19 pandemic: Shared leadership, social capital, and contagion among health professionals. *Int. J. Health Plan. Manag.* **2020**, *35*, 1606–1610. [CrossRef]
37. Republika Srbija, Ministarstvo Finansija. *Ekonomске Mere za Pomoć Privredi i Građanima*. Available online: <https://mf.in.gov.rs/sr/aktivnosti-1/ekonomske-mere-za-pomoc-privredi-i-gradjanima-1> (accessed on 15 August 2021).
38. Fajgelj, S. *Metode Istraživanja Ponašanja*; Centar za Primenjenu Psihologiju: Beograd, Serbia, 2007.

39. Tabachnick, B.; Fidell, L. *Using Multivariate Statistics*, 6th ed.; Pearson: New York, NY, USA, 2013.
40. Hair, J.F.; Black, W.C.; Babin, B.J.; Anderson, R.E. *Multivariate Data Analysis*, 8th ed.; Cengage Learning: New York, NY, USA, 2019.
41. Marsh, H.W.; Hocevar, D. Application of confirmatory factor analysis to the study of self-concept: First-and higher order factor models and their invariance across groups. *Psychol. Bull.* **1985**, *97*, 562–582. [[CrossRef](#)]
42. Hu, L.-T.; Bentler, P.M. Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new Alternatives. *Struct. Equ. Modeling Multidiscip. J.* **1999**, *6*, 1–55. [[CrossRef](#)]
43. Pallant, J. *SPSS Survival Manual—A Step by Step Guide to Data Analysis Using SPSS for Windows*, 3rd ed.; Maidenhead Open University Press: Maidenhead, UK, 2016.
44. Fornell, C.; Larcker, D. Structural equation models with unobservable variables and measurement error. *J. Mark. Res.* **1981**, *18*, 39–50. [[CrossRef](#)]
45. López-Cabarcos, M.; López-Carballeira, A.; Ferro-Soto, C. New ways of working and public healthcare professionals' well-being: The response to face the COVID-19 pandemic. *Sustainability* **2020**, *12*, 8087. [[CrossRef](#)]
46. Kitsios, F.; Kamariotou, M. Job satisfaction behind motivation: An empirical study in public health workers. *Heliyon* **2021**, *7*, e06857. [[CrossRef](#)]
47. Optimizacija Mreže Zdravstvenih Ustanova u Srbiji. Novi Master Plan za Novi Zdravstveni Sistem do 2035. Available online: <https://optimizacijazdravstva.rs/novi-masterplan-za-novi-zdravstveni-sistem-do-2035> (accessed on 15 August 2021).
48. Huber, P.; Schubert, H.J. Attitudes about work engagement of different generations—A cross-sectional study with nurses and supervisors. *J. Nurs. Manag.* **2019**, *27*, 1341–1350. [[CrossRef](#)] [[PubMed](#)]
49. Schopman, L.M.; Kalshoven, K.; Boon, C. When health care workers perceive high-commitment HRM will they be motivated to continue working in health care? It may depend on their supervisor and intrinsic motivation. *Int. J. Hum. Resour. Manag.* **2017**, *28*, 657–677. [[CrossRef](#)]
50. Chmielewska, M.; Stokwizewski, J.; Filip, J.; Hermanowski, T. Motivation factors affecting the job attitude of medical doctors and the organizational performance of public hospitals in Warsaw, Poland. *BMC Health Serv. Res.* **2020**, *20*, 1–12. [[CrossRef](#)] [[PubMed](#)]
51. Morishita, K.; Takase, K.; Ishikane, M.; Otomo, Y. Impact of incentives for health-care workers wearing personal protective equipment while dealing with coronavirus disease in Japan. *J. Occup. Health* **2021**, *63*, e12213. [[CrossRef](#)]
52. Almaghrabi, R.H.; Alfaradi, H.; Al Hebshi, W.A.; Albaadani, M.M. Healthcare workers experience in dealing with Coronavirus (COVID-19) pandemic. *Saudi Med. J.* **2020**, *41*, 657. [[CrossRef](#)]
53. Cardona, L.; Nour, S.; Huffman, K.; Al Qubaisi, S. Short reports: Well-being support of healthcare workers during COVID-19 in the Middle East. *Middle East. J. Posit. Psychol.* **2020**, *6*, 97–102.
54. Huang, Y.; Zhao, N. Generalized anxiety disorder, depressive symptoms and sleep quality during COVID-19 outbreak in China: A web-based cross-sectional survey. *Psychiatry Res.* **2020**, *288*, 112954. [[CrossRef](#)]
55. Majumder, P.; Jeeve, Y.; Sales, C.P. Voices from the frontline: The psychological impact and coping mechanisms used by healthcare staff during COVID-19. *Br. J. Healthc. Manag.* **2021**, *27*, 1–11. [[CrossRef](#)]
56. Neto, M.L.R.; Almeida, H.G.; Esmeraldo, J.D.A.; Nobre, C.B.; Pinheiro, W.R.; de Oliveira, C.R.T.; da Silva, C.G.L. When health professionals look death in the eye: The mental health of professionals who deal daily with the 2019 coronavirus outbreak. *Psychiatry Res.* **2020**, *288*, 112972. [[CrossRef](#)]
57. Mitsakis, F.V. Human Resource Development (HRD) resilience: A new 'success element' of organizational resilience? *Hum. Resour. Dev. Int.* **2019**, *23*, 321–328. [[CrossRef](#)]
58. Li, H.; Yuan, B.; Wang, D.; Meng, Q. Motivating factors on performance of primary care workers in China: A systematic review and meta-analysis. *BMJ Open* **2019**, *9*, e8619. [[CrossRef](#)] [[PubMed](#)]
59. Adzei, F.A.; Atinga, R.A. Motivation and retention of health workers in Ghana's district hospitals: Addressing the critical issues. *J. Health Organ. Manag.* **2012**, *26*, 467–485. [[CrossRef](#)] [[PubMed](#)]
60. Malesic, N.; Mavrak, M.; Rustempasic, N. Management of human resources: Significance of motivation strategy implementation in case of health care workers. *Balk. J. Health Sci.* **2013**, *1*, 218.