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Analysis of the Professional Aspects of Medical Drugs Industry in the Republic of Serbia in Times of COVID-19 Pandemic

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Abstract: The research subject of this paper is the analysis of the attitudes of employees in pharmaceutical companies towards the business aspects of the pharmaceutical industry during and after the end of the pandemic in the Republic of Serbia. The aim is to examine the differences in the attitudes of employees, as well as to determine which variables predict the situations of endangering the professional reputation of pharmaceutical companies during the COVID-19 pandemic. The research was conducted by means of a survey during 2021 on a sample of 27 innovative and generic pharmaceutical companies. We used the SPSS program for descriptive statistics analysis, chi square test and binary logistic regression models. The findings show that there is a statistically significant difference in the expressed attitudes of employees in innovative and generic pharmaceutical companies in terms of coming to the office during the pandemic; the lack of medicines and medical devices used in the treatment of COVID-19 infections; the patient access to a chosen doctor; the expectations of the employees to continue working from home after the outbreak of the COVID-19 pandemic. The findings of the binary regression models show the slowdown in the supply chain, the access to doctors and working from the home office have not been perceived as creating situations of endangering professional reputations, that is, they contribute to the sustainable economic success. On the other hand, the introduction of digital technologies decreases the occurrence of conditions in which their professional reputation has been threatened.

Keywords: pandemic COVID-19; pharmaceutical companies; business aspects; professional reputation; sustainable economic success; Republic of Serbia

1. Introduction

The global pandemic has affected many fields of economic and social behavior [1–3]. Global and national regulators have adopted measures to eliminate the effects of COVID-19, aimed at preserving human health, but also the financial health of the economy. The problems faced by pharmaceutical companies during the pandemic encompass the segment of management and the definition of new strategies regarding the medical treatments; research and development activities; balancing the drug supply chain; employment changes; pharmacy practice changes and pharmacists [4]. The COVID-19 pandemic in the pharmaceutical sector has contributed on the one hand to increased turnover and revenue [5,6], and on the other hand to reduced employment [7–9]. Changes in the pharmaceutical sector competitiveness [10], the changes in demand as well as shortages and supply disruptions [11], stockpiling, changes in employment [9], regulations and types of employment [12,13], the introduction of ICT technologies in the early diagnosis and detection of COVID-19 [14], communication with patients and healthcare professionals have been identified as important research subjects in the current literature. Accordingly, Elsheikh et al. [15] indicate that artificial intelligence should help researchers, experts and policy makers to develop more accurate prediction models and improved strategies to control the spread of this pandemic, to enable sustainable economic success.

In the European Union, the healthcare industries provided more than 7 million jobs in 2018 and the pharmaceutical industry accounted for about EUR 213 billion in market

value in 2019 with the medical technology sector (which was worth EUR 120 billion in 2018). The pharmaceuticals sector hit by the pandemic only during the early stages of the pandemic, while the pharmaceutical and digital sectors have been the least impacted sectors, with the recovery commenced during 2020. In the first wave of COVID 19 pandemic the demand for related medical treatments and equipment dropped. Self-medication (SM) gained importance and ssuggestions for (SM) came from friends, family, neighbours, pharmacists, media, etc. [16,17] and it involved the purchase of some supplements and herbal preparations [18]. However, the WHO then issued several cautionary warnings regarding SM for the treatment of COVID-19, including the irrational use of antibiotics, herbal medicines, and other drugs [19]. SM definitely helped to reduce the burden on the health system, state agencies, third parties [20] and helped to overcome the problems of the first wave of lack of medicines, supplements, disinfectants and protective agents and non-availability of doctors and health institutions in Serbia. That is why health policies have promoted laws and policies in favour of the use of prescribed drugs, but also improving public awareness and education about the safe and rational use of prescribed drugs. All this has affected on the generic pharmaceuticals sector which caused inconsistencies in the demand-supply ratio and new services such as e-Health and AI, which already started to develop before the pandemic, were continued to be implemented also through the pandemic [21]. In the Republic of Serbia the most significant share in the formation of GDP in 2020 has had the manufacturing sector, encompassing also the pharmaceutical manufacturing, which accounted for 13.7% of GDP in 2019 and 13.3% in 2020, while its real growth rate in the same year was 0.2%. The revenue of RSD 730,413 million was generated in this sector, which is a slight decrease compared to the revenue from 2019, when it had totaled RSD 741,815 million [22]. The outbreak of the pandemic has focused demand on the products of the pharmaceutical industry, while the production of basic pharmaceutical products has increased in 2021 [23].

On the other hand, the pharmaceutical sector has shown certain business specifics [24], which differ from country to country [3]. Watson et al. [4] (2021, p. 13) outline that "the prolonged nature and demands of COVID-19 has been the catalyst to the new equilibrium of pharmacy practice change and pharmacists' professional role identity". During the COVID-19 pandemic, the majority of the pharmacists were engaged with the pharmaceutical industry with a growing number now employed in the community pharmacies or at retail pharmacies [25]. The findings show, that during the COVID-19 pandemic, pharmacists participated in health education and promotion, medication dispensing, medication reconciliation, medication and patient counselling, training for self-management, and emergency preparedness [26]. Ayati et al. [24] indicate that in previous recessions, the pharmaceutical industry has shown less sensitivity, which indicates a high degree of vitality of the pharmaceutical sector and the ability to achieve long-term sustainable economic success. Florio and Gamba [27] emphasize the need to identify research priorities in the public health sector, with a focus on developing preventive and therapeutic strategies against those diseases that will pose the greatest threat to human and social well-being in the coming decades. In the post-COVID-19 time, countries need to strive to move towards greater political coordination, crisis management, and crisis communications [28]. COVID-19 could also create an opportunity for leadership across groups such as families, workplaces, local communities, and nations [29].

The findings of the authors of [30] about the attitudes of pharmacy professionals in Africa, Asia, the Americas, Europe, and the Pacific point to personal concerns regarding the spread of the COVID-19 infection, business problems due to isolation, quarantine, and difficulties in physical communication with colleagues. The authors point out that until the outbreak of the pandemic, pharmacy professionals did not have the opportunity to work remotely or only sporadically. After the outbreak of the pandemic, they were simply forced to find a solution, which gave remote work a new dimension. On the other hand, respondents who work in academia, professional bodies and industry were more likely to work remotely compared to those in government and patient-facing roles

such as community and hospital [30]. The pandemic has also caused the separation by professionals of work and non-work lives related to conforming to a set physical location for client interactions that includes office from home [12]. The recognition of workplace-specific infection risks, provision of reliable personal protective equipment, redesign of work practices, discouragement of presenteeism, and improved access to sick leave have been vital in the crisis [31]. Many papers have researched the risks for sustainable economic success, the economic and health care impacts during the times of the COVID-19 in the medical sector [7–9,32,33]. In their comprehensive review on the concept of underemployment, the findings show that the effects of underemployment are similar to those of unemployment [7]. Considerable short and long-term implications of the pandemic have been stressed in regard to informal employment and the informal economy [9], as the findings of the preliminary forecast of the regional employment effects of COVID-19 across Chilean regions have estimated the loss in the average scenario was around 705,000 jobs [8].

As the global pandemics have affected all business segments, a logical question arises as to the overall impact on the sustainable economic success and professional reputation of the pharmaceutical companies. Manabe and Nakagawa [34] have pointed out that the companies with high brand reputations were more susceptible to the coronavirus shock, while the companies with a strong reputation for product/service usefulness had greater resilience to the shock. Pollak et al. [35] point out that the effects of a pandemic on the reputation of healthcare providers have shown that while the traditional level of reputation of the entities reflected changes in the market only to a limited extent, the level of the online reputation has decreased significantly due to the pandemic. The findings relating to company reputation in the Republic of Serbia [36] have shown that companies can particularly assume their responsibilities by contributing to the improvement in the consumer's lifestyle [37]. The findings on the mediating role of patient satisfaction in the effect of corporate reputation on patient loyalty have shown that corporate reputation positively affects patient loyalty, and patient satisfaction plays a positive increasing role in this effect [38]. Research shows that public perception was influenced by the empathy of the brand and the company behavior before the COVID-19 period [39]. The study of Dwiedienawati et al. [40] confirms that the transformational leader, the crisis management team, the quality of communication, and the frugal innovation type positively influenced the sustainable economic success and effectiveness of crisis management which led to corporate reputation.

Due to the fact that the business activities of the pharmaceutical industry have a strong impact on drug supply and the health system as a whole [41,42], the current study should contribute to the relevant literature of the pharmaceutical industry of the Republic of Serbia, in order to identify specific challenges for business reputation and sustainable economic success and actions in the country in times of the COVID-19 pandemic. According to Jovanović et al. [43], the law defines the provisions for the protection of intellectual property, especially for the patent protection regarding medicines. The pharmaceutical companies can be divided into two groups based on the ownership of patents for the original drugs. Innovative companies have a patent that was developed on the basis of a new substance, that is, they are manufacturers of original drugs. Generic companies produce drugs for which the basic patent protection has expired. In recent times, the generic industry is increasingly innovative because it produces drugs with new technologies, with the use of new materials. This research should fill this gap, i.e., explain the importance of knowing the impact of the pandemic on the operations of companies in the pharmaceutical sector, i.e., knowing the factors and their predictive impact on jeopardizing business reputation and sustainable economic success. Since the respondents have different attitudes, the research aims to examine the conditioning and the degree of influence and significance of these differences on attitudes about the existence of risk to business reputation. Therefore, the attitudes of employees in pharmaceutical companies should be experienced as guidelines for increasing the company's reputation. The study contributes to the improvement of knowledge of the

role of the attitudes of employees in pharmaceutical companies on business reputation, performance and competitive advantage in Serbia. Finally, the study should offer pharmaceutical company managers and practitioners' knowledge and information that will be useful to them in similar risky situations in order to increase business performance and sustainable economic success.

Therefore, the first specific objective of this research were to examine the differences in attitudes between employees in innovative and generic companies in the pharmaceutical sector on the specifics of conducting business during the COVID-19 pandemic. The second specific objective has been to determine which independent variables predict the situations of endangering of the professional reputation of pharmaceutical companies during the COVID 19 pandemic.

After the introductory part, the authors present the literature review on the impact of the pandemic on the business of the pharmaceutical industry. The methodological framework focuses on the goal of the research and the research methods used, followed by the research findings and their discussion. In conclusion, the authors summarize the findings, present the limitations of the research, and make policy recommendations.

2. Method

The research examined the attitudes of the representatives of the Serbian pharmaceutical companies on the specifics of the pharmaceutical business during the COVID-19 pandemic. The questionnaire that has been used in the research has been developed on the basis of previous studies conducted by the Organization for Economic Cooperation and Development [44]. For the purposes of the research, the questionnaire was adjusted to the needs of the survey and the situation in the Republic of Serbia. The specifics of business of pharmaceutical companies and attitudes of companies have been adapted from published papers modelled on the research of Ayati et al. [24] and Rockers et al. [41]. Initially, pre-validation was performed on an appropriate sample (10% of the total population of legal entities that participated in the survey). In this phase of validation, the respondents performed a review and content validity of the questionnaire.

The final version was sent to all pharmaceutical companies, legal entities operating in the territory of the Republic of Serbia, and are located within the following associations: INOVIA (representative office or representative office of a company of innovative drug manufacturers), GENESIS (representative office or representative office of a generic drug company) and Chamber of Serbia (domestic manufacturers of generic drugs). This includes a total of 53 legal entities, while the full responses have beenreceived from 27 companies. Associations of drug manufacturers (INOVIA and GENEZIS) and the Chamber of Commerce posess all information about members (contacts and emails). After taking over the official contact of a particular company, a telephone conversation was held to make sure that we are sending the survey link to the right address (manager and employee). The survey was created in the Google application and the questionnaire link was sent by email. The research was conducted during October 2021. In the text of the email, an explanation of the goal of the research was provided and an explanation was given that the project is being carried out for scientific research purposes and that all information and data that will be collected during the research are strictly confidential and in accordance with the General Data Protection Regulation. Due to the sensitivity of the data and the protection of the identity of the respondents. All answers were treated as anonymous and the obtained data were processed at the group level. The questions were divided into units and where we felt it was necessary there was a clarification. The questionnaire consists questions divided into 5 parts: (1) general data and characteristics of the company—type and size of business entity (2) economic parameters of business during the pandemic—change in structure and income of business entity due to pandemic (3) specificity of pharmaceutical business in time of the pandemic—activities of the business entity, professional reputation, ethics and corporate culture (4) attitudes towards the availability of medicines and health

care (5) attitudes towards the business of the pharmaceutical industry after the end of the pandemic.

Questions 1—The questions in the first and second groups were in the form of multiple choice answers, the questions in the third group had the possibility of answering yes and no, while the questions in the fourth and fifth groups were presented in the form of a scale. The questionnaire included questions and claims on the impact of the pandemic on the following aspects of pharmaceutical companies in the Republic of Serbia: company structure (number of employees, changes in the number of employees, type of work environment), financial aspects, business activities (common and specific as part of the pandemic response in the drug supply chain, introduction of new health technologies, digitalization, change in the company's portfolio, impact of the pandemic on business responsibility, ethics and corporate culture, conflict of personal interests of the responsible person and the interests of the company, etc.), and availability of the health system during the pandemic (patient access to a selected doctor—consultant services, patients' access to necessary medicines, the state of the drug donation program in the COVID-19 pandemic). We presented the research using a workflow:

- Step 1. Defining the problem and research objective—a literature review was conducted to verify research models and key variables to be included in the research.
- Step 2. Defining the statement and designing the survey; initial items were pre-tested.
- Step 3. Collect the data and generate the final set of variables.
- Step 4. Statistical analysis—the collected data were tested for reliability and dimensionality (Cronbach's alpha). Some suggestions were made about items to exclude/include and the scale was adapted.
- Step 5. Prepare the final scale and the data were collected, the final sample was obtained.
- Step 6. Final statistical analysis (Chi square and binary logistic regression).
- Step 7. Discussion and interpretation of results.

Data processing was performed using the SPSS program for statistical data processing. Descriptive statistics, the Chi square test, and binary logistic regression models were used to analyze the phenomena in detail.

As part of the descriptive statistical data processing, the mean value and the percentage share of individual answers in the total sample were calculated. Thus, the arithmetic mean represents an average value in order to express certain average characteristics of a population or sample. The arithmetic mean of a set of quantitative data is the sum of all values divided by the total number of objects of which the data set consists [45]:

$$\bar{X} = \frac{\sum_{i=1}^{n} X_i}{n}$$

The Chi square test was employed to analyze the results of the differences in attitudes between employees in innovative and generic pharmaceutical companies on the specifics of conducting business during the COVID-19 pandemic [46]. The Chi square test—X^2—is used by examining whether the obtained distribution deviates from the expected distribution, whether the characteristics of our sample deviated from the distribution in the population by some variable. The Chi square test calculates the extent to which the observed distribution of values deviates from the theoretical distribution [47]:

$$X^2 = \sum_{i=1}^{k} \frac{(O_i - E_i)^2}{E_i}$$

Binary logistic regression is used to predict categorical outcomes with two or more categories and is used to investigate the predictive power of sets or blocks of variables and allows specifying the way variables are entered [48]. By conducting binary logistic regression, the authors have tried to analyze the influence of independent variables which predict the attitudes pharmaceutical companies on working conditions that could endanger their professional reputation and sustainable economic success during the COVID-19

pandemic [49,50]. The dependent variable is "During the Covid19 pandemic, were you in situations where you worked in conditions that threatened your professional reputation", while the independent variables are from the categories: specificity of the pharmaceutical business during the pandemic; attitudes about the availability of medicines and healthcare; and attitudes according to the operations of the pharmaceutical industry after the end of the pandemic. The variables were not directly and immediately included in the model, which could lead to an underestimation of their influence, but they were successively included in the model and tested in order to find the optimal solution, that is, to build a model for predicting professional reputation. Therefore, binary logistic regression was performed in 3 steps using the Forward Stepwise (Likelihood Ratio) method.

3. Results and Discussion

The survey results show that 48.1% of respondents were directors in the companies, while 51.9% of respondents were in other lower positions. The survey covered 59.3% of innovative companies and 40.7% of generic companies (domestic and foreign) (Table 1).

Table 1. General data, characteristics of the company, and economic parameters of business during the pandemic.

General Data and Characteristics of the Company		Percent
Which group does your company belong to?	Innovative *	59.3
	Generic **	40.7
How many employees does your company have in Serbia (at the time of completing the questionnaire)?	less than 25 employees	37.0
	more than 25 employees	63.0
What was the income of your company in Serbia in the year before the COVID-19 pandemic?	up to EUR 8 million	55.6
	more than EUR 8 million	44.4
Economic parameters of business during the pandemic		
What is the percentage of employees in your company in Serbia who, due to the pandemic, did not come to office either due to impossibility or due to non-obligation?	up to 20%	55.6
	more than 20%	44.4
Did your company encounter financial difficulties during the previous period, and after the outbreak of the COVID-19 pandemic?	no financial difficulties	81.5
	suppliers debt	7.4
	salaries debt	11.1
Did your company encounter problems during the COVID-19 pandemic?	no problems	18.5
	logistical problems	48.1
	Other	33.3
What was the total income of your company in Serbia in 2020 compared to 2019?	the same	7.4
	increased up to 10%	33.3
	increased over 10%	33.3
	decreased up to and more than 10%	14.8
	I do not know	11.1
What were the total costs of your company in Serbia in 2020 compared to 2019?	the same	22.2
	increased up and more than 10%	37.0
	decreased up to and more than 10%	33.3
	I do not know	7.4

* Innovative companies have a patent that was developed on the basis of a new substance, that is, they are manufacturers of original drugs. ** Generic companies produce drugs for which the basic patent protection has expired.

The sample includes 63% of pharmaceutical companies with more than 25 employees. The survey showed that 55.6% of companies had revenues of less than EUR 8 million in 2019, i.e., before the pandemic, and that 55.6% of companies had up to 20% of workers who did not come to the office either because it was impossible, or they were not obligated to come. An important fact is that as many as 81.5% of companies did not have financial

difficulties in the period after the declaration of the pandemic in the country, and that 66.6% of companies had an increase in revenue in 2020 to 10% and more than 10%. Of the companies analyzed, 37% had a cost increase of up to 10% and a 33.3% cost reduction of up to 10%, which is in line with the conclusions [5,6,51] on the impact of the pandemic on the business of pharmaceutical companies (Table 1).

The analysis of the business specifics of pharmaceutical companies during the pandemic (Figure 1) shows that 96.3% of respondents were of the opinion that during the economic activity there were situations that would jeopardize professional reputation and that personal interests were in conflict with the company's interests. In addition, 92.6% of respondents expressed problems with investing in R&D, which is in line with the study of Robinson [52].
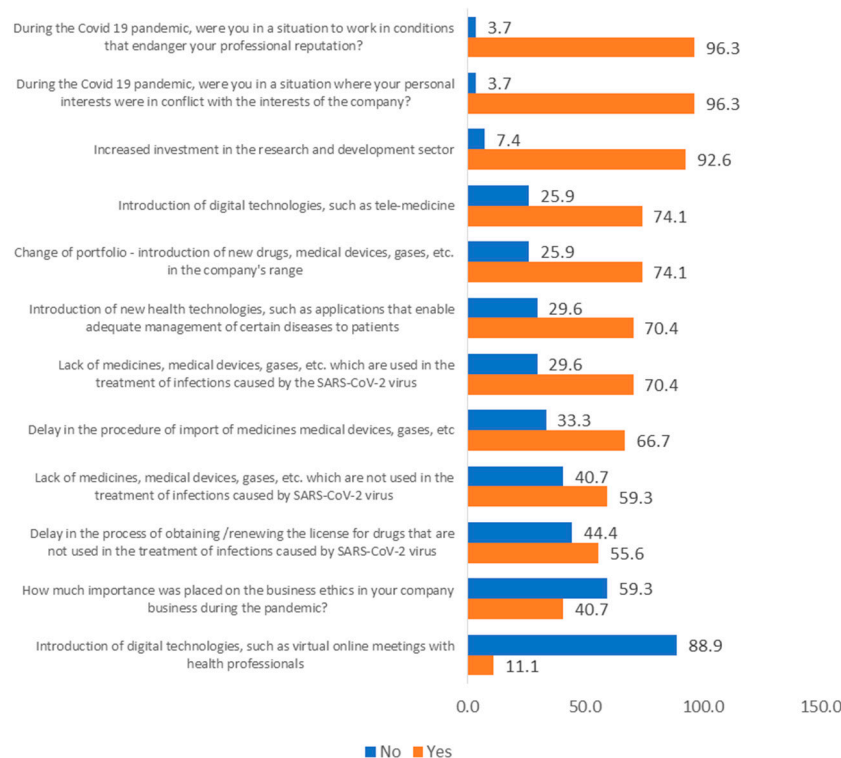

Figure 1. Specificity of pharmaceutical business during the pandemic (in %).

The attitudes towards the availability of medicines and health care research was also conducted on a sample of pharmaceutical companies, due to the fact that in the Serbian health system they are in direct communication with the state health institutions and the private sector, as well as with pharmacy institutions. In that position, they have data on the needs of the system, i.e., whether there has been a reduction in ordering and in which categories of drugs there has been a change in consumption (and the change is a direct consequence of the impossibility or difficulty in prescribing and issuing certain prescription drugs).

The findings show that during the pandemic there was a problem with access to medicines and doctors. Non-COVID-19 patients were particularly affected, e.g., the pandemic caused major shocks, which is in line with the conclusions of Stevanović [53], Watson et al. [4] and Auyeung et al. [54]. It is possible to conclude that during the pandemic many hospitals were forced to close their doors, leaving patients without therapy for an indefinite time, and doctors under increased stress and with "burnout" syndrome. A similar situation happened in developed and underdeveloped countries, which resulted in patient frustration and to threats and physical attacks on health workers [55]. The findings further indicate that the introduction of new drugs or treatments was significantly more difficult and slowed down, which is in line with the conclusions of Clark et al. [56].

The authors point out that at the beginning of the pandemic, there was a decrease in the start of systemic treatments, i.e., anti-cancer treatments in England. The availability of non-COVID-19 drugs was compromised [11,21], further complicating the treatment of chronically sick patients [57–60]. The situation later changed, which was influenced by factors to reduce clinical and social risk (such as telephone consultations, face masks, and physical distancing). Unfortunately, in the Republic of Serbia, the problem of introducing new procedures and drugs was taking more time, due to the fact that the introduction of digital technologies, such as tele-meetings with health professionals, was either slow or completely absent (Figure 2).
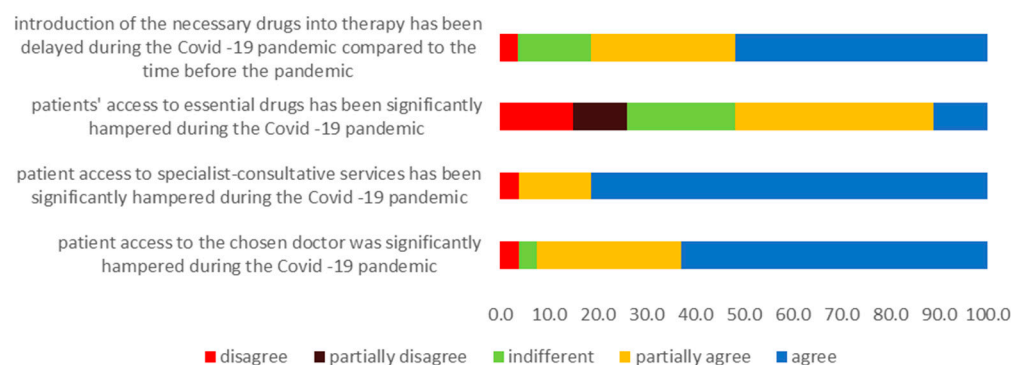

Figure 2. Attitudes towards the availability of medicines and health care (in %).

The majority of respondents are of the opinion that the drug donation program was not altered during the pandemic (44.4%) and that the number of employees after the end of the pandemic (51.9%) would remain the same. On the other hand, the findings show that the pandemic did not have a significant impact on the revenues of pharmaceutical companies, which is in line with Sandoval et al. [51]. The survey results show that a third of workers have returned to work (33.3%), with a significant percentage of respondents (29.6%) who believe that 10–50% of workers will continue working from home (Table 2).

Table 2. Attitudes towards the business of the pharmaceutical industry after the end of the pandemic.

Statement	Respondents' Answers	Percent
In your opinion, has the drug-free donation program been altered due to the COVID-19 pandemic?	its volume has been the same	44.4%
	its volume has been increased/compared to time before the pandemic	14.8%
	its volume has been reduced/compared to time before the pandemic	14.8%
	we do not have a donation program	25.9%
In your opinion, will the number of employees in the company in Serbia change after the end of the pandemic is announced?	it will remain the same	51.9%
	it will be enlarged	29.6%
	I do not know	18.5%
In your opinion, do you expect some employees to continue working from home office?	everyone is coming back to the office	33.3%
	less than 10% are working from home office	22.2%
	10% to 50% are working from home office	29.6%
	I do not know	14.8%

The Chi-Square test of the differences between the groups was further performed for five groups of questions and only those that were statistically significant were presented (Table 3).

Table 3. The Chi-Square test of the differences between the groups (innovative * and generic **).

What is the percentage of employees in your company in Serbia who, due to the pandemic, did not come to the office either due to impossibility or due to non-obligation?			
Which group does your company belong to?	Up to 20%	More than 20%	I do not know
Innovative	37.5%	56.3%	6.3%
Generic	81.8%	18.2%	0.0%
Chi2 = 5.31; *p*= 0.049;			

Lack of medicines, medical devices, gases, etc., which are not used in the treatment of SARS-CoV-2 virus infections;		
Which group does your company belong to?	No	Yes
Innovative	18.8%	81.3%
Generic	72.7%	27.3%
Chi2 = 7.867; *p*= 0.005;		

Patient access to the chosen physician has been significantly hampered in a COVID-19 pandemic.			
Which group does your company belong to?	Disagree	Indifferent	Partially agree	Fully agree
Innovative	0.0%	6.3%	50.0%	43.8%
Generic	9.1%	0.0%	0.0%	90.9%
Chi2 = 9.945; *p*= 0.019			

In your opinion, do you expect some employees to continue working from home?			
Which group does your company belong to?	Everyone is coming back to the office	Less than 10% are working from home	10% to 50% are working from home	I do not know
Innovative	25.0%	6.3%	50.0%	18.8%
Generic	45.5%	45.5%	0.0%	9.1%
Chi2 = 11.237; *p*= 0.011			

In your opinion, you expect your company's revenue after the end of the pandemic to be?				
Which group does your company belong to?	No change	Growth up to 10%	Growth more than 10%	Drop up to 10%	I can't estimate
Innovative	12.5%	31.3%	50.0%	0.0%	6.3%
Generic	9.1%	27.3%	9.1%	36.4%	18.2%
Chi2 = 10.029; *p*= 0.040.				

* Innovative companies have a patent that was developed on the basis of a new substance, that is, they are manufacturers of original drugs. ** Generic companies produce drugs for which the basic patent protection has expired.

The Chi-Square test showed a significant difference between innovative and generic companies (Table 3). In the analyzed sample, the majority of companies (56.3%) were faced with a situation where more than 20% of employees did not come to the office during the COVID-19 pandemic. More than 81% of innovative companies did have problems with shortages of drugs, medical devices, gases, etc., which were not used in the treatment of infections caused by SARS-CoV-19 virus, while as many as 72.7% of respondents from generic companies had the opposite opinion. A very high percentage of respondents

from innovative (93.8% partially and completely agree) and generic (90.9%) companies expressed the opinion that the access of patients to their chosen doctor has been more difficult in the COVID-19 pandemic. A significant percentage of innovative companies (81.3%) believed that revenue after the pandemic would grow to over 10%. In the sample of generic companies, 36.4% of companies expected a 10% drop in revenue. The result of the following analysis indicates that 50% of respondents from innovative companies believe that 10–50% of workers would continue to work from home and 90.1% of respondents from generic companies believed that workers are returning to the office or up to 10% of employees would continue to work from home.

The questions investigated and presented in Tables 2 and 3 relate to the evaluation of pharmaceutical companies' operations after the pandemic, as opposed to the actual performance indicators in the period after a certain time. It would be significant if we were able to provide those answers as well, and compare the obtained results, which actually represents a limitation of the existing study, but also a direction for further research.

Binary Logistic Regression Models

Binary logistic regression was conducted with the aim of determining which independent variables predict the attitudes of pharmaceutical companies on working conditions that affect their professional reputation during the COVID-19 pandemic. In the regression dependent variable is "During the Covid19 pandemic, were you in a situations to work in conditions that endanger your professional reputation", and the authors tried to measure the predictive impact of all variables from the categories: specificity of pharmaceutical business in time of the pandemic, attitudes towards the availability of medicines and health care, and attitudes towards the business of the pharmaceutical industry after the end of the pandemics.

In Model 1, two of the predictive variables in the group of "Specificity of pharmaceutical business in the time of the pandemic" have been retained. Model 1 is statistically significant Chi2 = 22.144; p = 0.000. The model as a whole explains the 18.5% Cox and Snell R Square and 25% Nagelkerke R Square variants of the dependent variable, i.e., of conditions of endangering professional reputation and accurately classifies 77.8% of cases. As shown in Table 4, only two variables made a statistically significant contribution to the model (Lack of medicines, medical devices, gases, etc., used in the treatment of infections caused by SARS-CoV-2 virus and Introduction of digital technologies, such as tele-medicine). The extended Model 2 has four variables and is statistically significant Chi2 = 37.411; p = 0.000. The model as a whole explains the 29.3% Cox and Snell R Square and 39.5% Nagelkerke R Square variants of the conditions of endangering professional reputation and accurately classifies 74.1% of cases. As we have shown, the variable Lack of medicines, medical devices, gases, etc., used in the treatment of SARS-CoV-2 virus infections made a statistically significant contribution to the model and has a more significant predictor effect than Model 1. Finally, the expanded Model 3 has six variables of which five are statistically significant. Model 3 is statistically significant Chi2 = 55.701; p = 0.000. The model as a whole explains 40.3% of the Cox and Snell R Square and 54.4% of the Nagelkerke R Square variants of the condition of endangering professional reputation and accurately classifies 88.9% of cases.

The research findings on the contribution of variables in the model show that the predictors: work from home office; a slowdown in the process of obtaining import licenses; changes in the drug donation program; lack of medicines, medical devices, gases: difficulties in patients accessing a chosen physician; and introduction of digital technologies, such as tele-medicine, showed statistical significance.

Table 4. The findings of binary logistic regression models.

Block 1: Method = Forward Stepwise (Likelihood Ratio)	B	Sig	Exp(B)	Block 2: Method = Forward Stepwise (Likelihood Ratio)	B	Sig	Exp(B)	Block 3: Method = Forward Stepwise (Likelihood Ratio)	B	Sig	Exp(B)
Lack of medicines, medical devices, gases, etc. which are not used in the treatment of SARS-CoV-2 virus infections	−1.502	0.003	0.223	Lack of medicines, medical devices, gases, etc., which are not used in the treatment of SARS-CoV-2 virus infections	−1.072	0.045	0.342	Lack of medicines, medical devices, gases, etc., which are not used in the treatment of SARS-CoV-2 virus infections	−0.943	0.095	0.389
Introduction of digital technologies, such as tele-medicine	−1.715	0.000	0.180	Introduction of digital technologies, such as tele-medicine	−1.777	0.001	0.169	Introduction of digital technologies, such as tele-medicine	−2.779	0.000	0.062
Constant	0.644	0.036	1.905	Patient access to the chosen physician has been significantly hampered in pandemic	−0.902	0.049	0.406	Patient access to the chosen physician has been significantly hampered in pandemic	−2.276	0.006	0.103
				The drug-free donation program has been altered due to the COVID-19 pandemic.	−0.547	0.009	0.579	The drug-free donation program has been altered due to the COVID-19 pandemic	−0.645	0.010	0.525
				Constant	4.989	0.006	146.86	A part of the employees will continue to work from home.	−0.028	0.011	0.972
Predicted (Overall Percentage) = 77.8 Chi-square (df) Sig. = 22.144 (2) 0.000; −2 Log likelihood = 123.851; Cox and Snell R Square = 0.185; Nagelkerke R Square = 0.250.				Predicted (Overall Percentage) = 74.1; Chi-square (df) Sig. = 37.411 (4) 0.000; −2 Log likelihood = 108.583; Cox and Snell R Square = 0.293; Nagelkerke R Square = 0.395.				Slowdown in the process of obtaining import licenses	−0.084	0.056	0.920
								Constant	11.392	0.002	8626.8
								Predicted (Overall Percentage) = 88.9; Chi-square (df) Sig. = 55.701 (6) 0.000; −2 Log likelihood = 90.293; Cox and Snell R Square = 0.403; Nagelkerke R Square = 0.544.			

The odds of answering "yes" contributes to the perceived condition of endangering professional reputation, compared to "no", are lower 0.972 times in terms of each unit increase in the predictor variable "A part of the employees will continue to work from home" on the scale (they all return to office, less than 10% will continue to work from home, 10–25% will continue to work from home, etc.), while the other predictors in the model remain constant. The findings show that the culture of working from home in the COVID-19 pandemic has been accented, as the intensity of the crisis has risen, and the performance of employees has been measured in quantum of output and work completion rather than time or days at the workplace [13]. The findings are in line with Ashiru-Oredope et al. [30] outlining that pharmacy professionals working in academia, professional bodies, and industry were more likely to work remotely compared to those in government and patient-facing roles such as in the community and hospitals. The crises calls upon organizations to question their organizational commitment and manner of conducting business as "it seems likely that the greater the perceived hardship borne by an organization to voluntarily protect its employees and other stakeholders, the greater the boost in identification" (p. 1765) [61], while the moral obligation for companies is to proactively and responsibly manage the crisis without endangering professional reputation and sustainable economic success [62,63].

The odds of answering "yes" contributes to perceived conditions of endangering professional reputation, compared to "no", are lower 0,920 times in a situation when the slowing down of the process of obtaining permits to import drugs, "increases" (i.e., answer yes instead of no) and other predictors in the model remain constant. The findings are in line with the consequences of the pharmaceutical market pandemic that have been also reflected in delays in registration procedures and the slowdown in drug licensing [24], slowdown in growth of the industry due to the introduction of new, innovative drugs, given the changing priorities in the portfolio of pharmaceutical companies. In Paraguay, there were several decrees aiming to facilitate international trade in medical supplies, both to incentivize imports and to disincentive exports with a temporary reduction or, temporary total suspension, in value added taxes (VAT) on certain imported personal protective equipment and pharmaceutical products [64].

The odds of answering "yes" contributes to the perceived conditions of endangering professional reputation, compared to "no", are lower 0.525 times in a situation when the altered drug donation program of each unit increases and other predictors in the model remain constant. The findings confirm the logistical problems, particularly supply chain disruption and product wastage, due to COVID-19 that were often found in the literature as most sectors experienced the shutdown of suppliers or the sudden imbalance between supply and demand for certain products [65]. The emergence of induced demand, which leads to shortages, is a consequence of the COVID-19 pandemic, but also shortages due to disruptions in the supply chain.

The value of the exponential coefficient of the predictor variable "difficult access to a doctor during a pandemic", shows that the odds of answering "yes" (contributes to perceived conditions of endangering of the professional reputation) in relation to the answer "no", are lower 0.103 times in terms of each unit increase on the scale of the predictor variable "difficult access to the doctor" (from "I don't agree at all" to "I partially disagree", etc.) while the other predictors in the model remain constant. The findings indicate that the difficulty in accessing doctors is therefore less likely to influence the situation of endangering the professional reputation and sustainable economic success of pharmaceutical companies.

The process of introducing digital technologies, such as tele-medicine, i.e., problems with the application of digital technologies, has a significant contribution. The odds of answering "yes" (contributes to perceived conditions of endangering professional reputation and sustainable economic success), compared to "no", are lower 0.062 times in a situation when the introduction of digital technologies, such as tele-medicine, "increases of 1" (i.e., answer yes instead of no) and other predictors in the model remain constant. Therefore, the introduction of digital technologies reduces the occurrence of conditions

where the professional reputation has been endangered. The findings are in line with Webster [66] stating that high-income or upper-middle-income countries were able to quickly provide online health care and users embraced the technology, therefore a slowdown in the process of introduction of digital technologies is perceived to decrease the situations of endangering professional reputation and sustainable economic success.

4. Conclusions

Looking at the situation from the aspect of the global economy, the 21st century is a period of a significant increase in investment in the pharmaceutical industry sector. The modern pharmaceutical industry, with a high degree of flexibility, adapts its production to changes in demand in the market of pharmaceutical products, while satisfying the interests of the manufacturers and the consumers. The COVID-19 pandemic has affected the world economy, including the pharmaceutical sector. Although there is currently no definitive treatment for the new infectious disease, the pharmaceutical industry is helping governments respond to the need to for prevent the COVID-19 disease, encompassing research and development actions on potential treatment strategies and balancing the drug supply chain, striving to maintain the supply of other drugs on the market.

From the findings, it is clear that most of the surveyed companies did not have financial difficulties in the period after the declaration of the pandemic in the country, and had an increase in revenue, as if during their everyday business activity there were situations that would jeopardize professional reputation and sustainable economic success and that there were problems with investing in R&D, access to medicines, and the introduction of new drugs or treatments. The regression findings show that the slowdown in obtaining import licenses and difficulty in accessing a doctor have lesser odds to indicate the occurrence of the event of endangering professional reputation and sustainable economic success of pharmaceutical companies. In addition, the altered level of the drug-free donation program and the higher percentage of employees that will continue to work from home show they are less likely to indicate the endangering of professional reputation. The introduction of digital technologies is more likely to reduce situations where professional reputation is endangered.

In that regard, employers should aim to create adequate mechanisms for working in crisis situations, such as COVID-19 pandemic conditions, taking into account the specifics of the pharmaceutical jobs. By analyzing the pharmaceutical industry in relation to the current market trends, the expected results in the context of social contribution are reflected in the prediction of the impact of future trends of the observed indicators in the conducted research. In this way, a set of concrete measures can be presented that will affect the improvement in the macroeconomic environment, and the possibility of economic growth in the observed region and overcoming the recession, despite the limiting factors of the current pandemic. This research can enable the assessment of the adaptive response of pharmaceutical companies in the conditions of the COVID-19 pandemic. In addition, the findings clearly show the differences between certain categories of pharmaceutical companies and their activities during the COVID-19 pandemic, the effects of the pandemic on the professional reputation and sustainable economic success of pharmaceutical companies, and give insight into the availability of health care in terms of patient access to the chosen doctor, specialist-consultative services, and especially access to necessary medicines to a broader audience.

A survey of pharmaceutical companies conducted after the first wave of the pandemic has given us the responses regarding the problems they faced during the pandemic. On the other hand, the respondents then expressed an assessment of the business that should follow immediately after the end of the pandemic. However, the end of the pandemic has not been declared in Serbia, and the question arises as to how far-reaching the assessment is. That is, it is difficult to determine the moment when it is possible and when it is necessary to repeat the research and establish the real situation, that is, the characteristics of the pharmaceutical companies' operations. So, on the one hand, we have an assessment of

the future, and on the other hand, we have the fact that more than 2 years have passed since the declaration of the pandemic. We think that this limitation should be overcome by organizing the next piece of research that would provide a larger number of respondents and that would enable the comparison of ratings during and after the pandemic.

References

1. Chebli, A.; Ben Said, F. The Impact of COVID-19 on Tourist Consumption Behaviour: A Perspective Article. *J. Tour. Manag. Res.* **2020**, *7*, 196–207. [CrossRef]
2. Sarkodie, S.A.; Owusu, P.A. Global assessment of environment, health and economic impact of the novel coronavirus (COVID-19). *Environ. Dev. Sustain.* **2021**, *23*, 5005–5015. [CrossRef] [PubMed]
3. Nicola, M.; Alsafi, Z.; Sohrabi, C.; Kerwan, A.; Al-Jabir, A.; Iosifidis, C.; Agha, M.; Agha, R. The socio-economic implications of the coronavirus pandemic (COVID-19): A review. *Int. J. Surg.* **2020**, *78*, 185–193. [CrossRef] [PubMed]
4. Watson, K.E.; Schindel, T.J.; Barsoum, M.E.; Kung, J.Y. COVID the Catalyst for Evolving Professional Role Identity? A Scoping Review of Global Pharmacists' Roles and Services as a Response to the COVID-19 Pandemic. *Pharmacy* **2021**, *9*, 99. [CrossRef] [PubMed]
5. Quak, S.; Heilbron, J.; Meijer, J. Ranking, coordination, and global governance: The case of the Access to Medicine Index. *Bus. Politics* **2019**, *21*, 172–204. [CrossRef]
6. Mittal, S.; Sharma, D. The Impact of COVID-19 on Stock Returns of the Indian Healthcare and Pharmaceutical Sector. *Australas. Account. Bus. Financ. J.* **2021**, *15*, 5–21. [CrossRef]
7. Kaur, M.; Goyal, P.; Goyal, M. Individual, interpersonal and economic challenges of underemployment in the wake of COVID-19. *Work. A J. Prev. Assess. Rehabil.* **2020**, *67*, 21–28. [CrossRef]
8. Modrego, F.; Canales, A.; Bahamonde, H. Employment effects of COVID-19 across Chilean regions: An application of the translog cost function. *Reg. Sci. Policy Pract.* **2020**, *12*, 1151–1167. [CrossRef]
9. Webb, A.; McQuaid, R.; Rand, S. Employment in the informal economy: Implications of the COVID-19 pandemic. *Int. J. Sociol. Soc. Policy* **2020**, *40*, 1005–1019. [CrossRef]
10. Barbosa, D.M.E.; Ayala, A.H.; Sandoval, A.A. The Colombian pharmaceutical industry: Factors affecting export. *Eur. J. Manag. Bus. Econ.* **2016**, *25*, 39–46. [CrossRef]
11. Lozano-Diez, J.; Marmolejo-Saucedo, J.; Rodriguez-Aguilar, R. Designing a resilient supply chain: An approach to reduce drug shortages in epidemic outbreaks. *EAI Endorsed Trans. Pervasive Health Technol.* **2020**, *6*, e2. [CrossRef]
12. Hoff, T. COVID-19 and The Study of Professionals and Professional Work. *J. Manag. Stud.* **2021**, *58*, 1395–1399. [CrossRef]
13. Solanki, S. An Exploratory Study on Behavioral Science of HR Mangers to Respond the COVID-19 Challenge. 2020. Available online: https://ssrn.com/abstract=3590050 (accessed on 8 January 2021).
14. Elaziz, M.A.; Dahou, A.; Alsaleh, N.A.; Elsheikh, A.H.; Saba, A.I.; Ahmadein, M. Boosting COVID-19 Image Classification Using MobileNetV3 and Aquila Optimizer Algorithm. *Entropy* **2021**, *23*, 1383. [CrossRef] [PubMed]
15. Elsheikh, A.H.; Saba, A.I.; Panchal, H.; Shanmugan, S.; Alsaleh, N.A.; Ahmadein, M. Artificial Intelligence for Forecasting the Prevalence of COVID-19 Pandemic: An Overview. *Healthcare* **2021**, *9*, 1614. [CrossRef] [PubMed]
16. Azhar, H.; Tauseef, A.; Usman, T.; Azhar, Y.; Tomas Petrović, A.; Pavlović, N.; Stilinović, N.; Lalović, N.; Paut Kusturica, M.; Dugandžija, T.; et al. Self-medication perceptions and practice of medical and pharmacy students in Serbia. *Int. J. Environ. Res. Public Health* **2022**, *19*, 1193.
17. Azhar, H.; Tauseef, A.; Usman, T.; Azhar, Y.; Ahmed, M.; Umer, K.; Shoaib, M. Prevalence, Attitude and Knowledge of Self Medication during COVID-19 Disease Pandemic. *Pak. J. Med Health Sci.* **2021**, *15*, 902–905. [CrossRef]

18. Malik, M.; Tahir, M.J.; Jabbar, R.; Ahmed, A.; Hussain, R. Self-medication during COVID-19 pandemic: Challenges and opportunities. *Drugs Ther. Perspect.* **2020**, *36*, 565–567. [CrossRef] [PubMed]

19. World Health Organization. WHO Coronavirus Disease (COVID-19) Dashboard. Available online: https://covid19.who.int/?gclid=CjwKCAjwkdL6BRAREiwA-kiczFVgD9G2jqjziCEtALuFBCwLGVS3hXLfiP4Fcvpq4nPcz8cwu1G8SRoCs8kQAvD_BwE (accessed on 25 August 2022).

20. Noone, J.; Blanchette, C.M. The value of self-medication: Summary of existing evidence. *J. Med. Econ.* **2018**, *21*, 201–211. [CrossRef]

21. DE VET, J.M.; Nigohosyan, D.; Núñez Ferrer, J.; Gross, A.-K.; Kuehl, S.; Flickenschild, M. Impacts of the COVID-19 Pandemic on EU Industries', Study for the ITRE Committee. 2021. Available online: https://www.europarl.europa.eu/RegData/etudes/STUD/2021/662903/IPOL_STU(2021)662903_EN.pdf (accessed on 10 April 2022).

22. Republic Statistical Office. Available online: https://www.stat.gov.rs/ (accessed on 15 June 2022).

23. Vukotić–Cotič, G.; Simonović, V.; Kovačević, M.; Nikolić, I.; Stančić, K.; Stamenković, S.; Jovandić, I.; Korović, P.; Bumbić, D. Macroeconomic Analyses and Trends, No 320. 2021. Available online: https://api.pks.rs/storage/assets/MAT%20320%202021-09.pdf (accessed on 15 June 2022).

24. Ayati, N.; Saiyarsarai, P.; Nikfar, S. Short and long term impacts of COVID-19 on the pharmaceutical sector. *DARU J. Pharm. Sci.* **2020**, *28*, 799–805. [CrossRef]

25. Bukhari, N.; Rasheed, H.; Nayyer, B.; Babar, Z.-U. Pharmacists at the frontline beating the COVID-19 pandemic. *J. Pharm. Policy Pract.* **2020**, *13*, 8. [CrossRef]

26. Ahmad, A.; Alkharfy, K.M.; Alrabiah, Z.; Alhossan, A. Saudi Arabia, pharmacists and COVID-19 pandemic. *J. Pharm. Policy Pract.* **2020**, *13*, 41. [CrossRef]

27. Florio, M.; Gamba, S. Biomed Europa: After the coronavirus, a public infrastructure to overcome the pharmaceutical oligopoly. *Ann. Public Coop. Econ.* **2021**, *92*, 387–409. [CrossRef]

28. Jha, R.; Sharma, A. India's pharmaceutical industry: Global supply chain and governance in the post-COVID-19 world. ASARC Working Paper 2020/01. 2020. Available online: https://ssrn.com/abstract=3622794 (accessed on 15 June 2022).

29. Van Bavel, J.J.; Baicker, K.; Boggio, P.S.; Capraro, V.; Cichocka, A.; Cikara, M.; Crockett, M.J.; Crum, A.J.; Douglas, K.M.; Druckman, J.N.; et al. Using social and behavioural science to support COVID-19 pandemic response. *Nat. Hum. Behav.* **2020**, *4*, 460–471. [CrossRef] [PubMed]

30. Ashiru-Oredope, D.; Chan, A.H.Y.; Olaoye, O.; Rutter, V.; Babar, Z.-U.; Anderson, C.; Anderson, R.; Halai, M.; Matuluko, A.; Nambatya, W.; et al. Needs assessment and impact of COVID-19 on pharmacy professionals in 31 commonwealth countries. *J. Pharm. Policy Pract.* **2020**, *13*, 72. [CrossRef] [PubMed]

31. Eisen, D. Employee presenteeism and occupational acquisition of COVID-19. *Med. J. Aust.* **2020**, *213*, 140. [CrossRef] [PubMed]

32. Chamorro, C.; Carreras-Presas, C.M.; Sanz-Marchena, A.; A Rodríguez-Fernández, M.; Suárez-Quintanilla, J.M.; Rivas-Mundiña, B.; Suárez-Quintanilla, J.; Pérez-Sayáns, M. Assessment of the Economic and Health-Care Impact of COVID-19 (SARS-CoV-2) on Public and Private Dental Surgeries in Spain: A Pilot Study. *Int. J. Environ. Res. Public Health* **2020**, *17*, 5139. [CrossRef]

33. Patel, N. Impact on Dental Economics and Dental Healthcare Utilization in COVID-19: An Exploratory Study. *J. Adv. Oral Res.* **2020**, *11*, 128–136. [CrossRef]

34. Manabe, T.; Nakagawa, K. The value of reputation capital during the COVID-19 crisis: Evidence from Japan. *Financ. Res. Lett.* **2022**, *46*, 102370. [CrossRef]

35. Pollak, F.; Markovic, P.; Malinak, B.; Belovodska, K. Reputation Management in Times of the Pandemic—Empirical Analysis of Selected Health Care Providers Operating in the Slovak Market. *SHS Web Conf.* **2022**, *135*, 1010. [CrossRef]

36. Ignjatijević, S.; Janjetović, R.; Aničić, A. Uslovi poslovanja u republici Srbiji i rizici u međunarodnom poslovanju. *Oditor-Časopis Za Menadžment Finans. I Pravo.* **2016**, *2*, 7–20. [CrossRef]

37. Krasavac, B.C.; Karamata, E.; Soldić-Aleksić, J.; Radosavljević, K. Some Aspects of Corporate Social Responsibility and Company Reputation. *Manag. Sustain. Bus. Manag. Solut. Emerg. Econ.* **2021**, *26*, 3. [CrossRef]

38. Amarat, M.; Akbolat, M.; Dizlek, K. The mediating role of patient satisfaction in the effect of corporate reputation on patient loyalty. *Int. J. Health Manag. Tour.* **2022**, *7*, 64–75. [CrossRef]

39. Arief, N.N.; Pangestu, A.B. Perception and Sentiment Analysis on Empathic Brand Initiative during the COVID-19 Pandemic: Indonesia Perspective. *J. Creat. Commun.* **2021**, *17*, 162–178. [CrossRef]

40. Dwiedienawati, D.; Tjahjana, D.; Faisal, M.; Gandasari, D.; Abdinagoro, S.B. Determinants of perceived effectiveness in crisis management and company reputation during the COVID-19 pandemic. *Cogent Bus. Manag.* **2021**, *8*, 1912535. [CrossRef]

41. Rockers, P.C.; O Laing, R.; Scott, N.; Ashigbie, P.; Lucca, E.H.; Umeh, C.A.; Wirtz, V.J. Evaluation of pharmaceutical industry-led access programmes: A standardised framework. *BMJ Glob. Health* **2019**, *4*, e001659. [CrossRef] [PubMed]

42. Rockers, P.C.; Wirtz, V.J.; Umeh, C.A.; Swamy, P.M.; Laing, R.O. Industry-Led Access-to-Medicines Initiatives in Low- and Middle-Income Countries: Strategies and Evidence. *Health Aff.* **2017**, *36*, 706–713. [CrossRef]

43. Jovanović, S.; Matović, D.; Petrović, S. Inovativna i generička farmaceutska industrija i tržište lekova. *Industrija* **2010**, *38*, 105–119.

44. OECD. WTO Trade in Value Added. Available online: http://stats.oecd.org/ (accessed on 25 August 2021).

45. Biljan-August, M.; Pivac, S.; Štambuk, A. *Uporaba Statistike u Ekonomiji*; Ekonomski fakultet Sveučilišta u Rijeci: Rijeka, Croatia, 2009.

46. Vuković, I.-T.; Brdarević, M.; Čukljek, S.; Babić, J. The attitudes of nurses towards internship in the Republic of Croatia. *Croat. Nurs. J.* **2019**, *3*, 79–92. [CrossRef]

47. Biljan-August, M.; Pivac, S.; Štambuk, A. *Upotreba Statistike, Regresijska i Korelacijska Analiza*; Ekonomski fakultet Sveučilišta u Rijeci: Rijeka, Croatia, 2007.

48. Julie, P. *SPSS Survival Manual: A Step by Stem Guide to Data Analysis Using SPSS for Windows (Version 15)*, 3rd ed.; McGraw-Hill Education: New York, NY, USA, 2007.

49. Tsiantou, V.; Zavras, D.; Kousoulakou, H.; Geitona, M.; Kyriopoulos, J. Generic medicines: Greek physicians' perceptions and prescribing practices. *J. Clin. Pharm. Ther.* **2009**, *34*, 547–554. [CrossRef]

50. Woolson, R.F.; Clarke, W.R. *Statistical Methods for the Analysis of Biomedical Data*; John Wiley & Sons. Inc.: New York, NY, USA, 2002. [CrossRef]

51. Sandoval, J.L.; Friedlaender, A.; Addeo, A.; Weiss, G.J. Payments to key opinion leader physicians and drug sales of top pharmaceutical companies during the COVID-19 pandemic. *medRxiv* **2022**, *1*, 22268942. [CrossRef]

52. Robinson, J.C. Funding of Pharmaceutical Innovation during and after the COVID-19 Pandemic. *JAMA* **2020**, *325*, 825. [CrossRef] [PubMed]

53. Stevanović, P. Lečenje kritično obolelih COVID-19 pacijenata: Praktične smernice. *Med. Podml.* **2021**, *72*, 49–64. [CrossRef]

54. Auyeung, A.; Wang, H.; Pirvulescu, I.; Knežević, N.N. Uticaj COVID-19 pandemije na lečenje pacijenata sa hroničnim bolom. *Serb. J. Med. Chamb.* **2021**, *2*, 197–212. [CrossRef]

55. Iyengar, K.P.; Jain, V.K.; Vaishya, R. Current situation with doctors and healthcare workers during COVID-19 pandemic in India. *Postgrad. Med. J.* **2022**, *98*, e121–e122. [CrossRef]

56. Clark, J.J.; Dwyer, D.; Pinwill, N.; Clark, P.; Johnson, P.; Hackshaw, A. The effect of clinical decision making for initiation of systemic anticancer treatments in response to the COVID-19 pandemic in England: A retrospective analysis. *Lancet Oncol.* **2021**, *22*, 66–73. [CrossRef]

57. Schwartz, J.I.; Muddu, M.; Kimera, I.; Mbuliro, M.; Ssennyonjo, R.; Ssinabulya, I.; Semitala, F.C. Impact of a COVID-19 National Lockdown on Integrated Care for Hypertension and HIV. *Glob. Hear.* **2021**, *16*, 9. [CrossRef]

58. Ghosal, S.; Sinha, B.; Majumder, M.; Misra, A. Estimation of effects of nationwide lockdown for containing coronavirus infection on worsening of glycosylated haemoglobin and increase in diabetes-related complications: A simulation model using multivariate regression analysis. *Diabetes Metab. Syndr. Clin. Res. Rev.* **2020**, *14*, 319–323. [CrossRef]

59. Armstrong-Hough, M.; Kishore, S.P.; Byakika, S.; Mutungi, G.; Nunez-Smith, M.; Schwartz, J.I. Disparities in availability of essential medicines to treat non-communicable diseases in Uganda: A Poisson analysis using the Service Availability and Readiness Assessment. *PLoS ONE* **2018**, *13*, e0192332. [CrossRef]

60. Kabagenyi, A.; Kyaddondo, B.; Nyachwo, E.B.; Wasswa, R.; Bwanika, J.M.; Kabajungu, E.; Kiragga, A. Disruption in Essential Health Service Delivery: A Qualitative Study on Access to Family Planning Information and Service Utilization during the First Wave of COVID-19 Pandemic in Uganda. *Open Access J. Contracep.* **2022**, *ume 13*, 75–82. [CrossRef]

61. Ashforth, B.E. Identity and Identification During and After the Pandemic: How Might COVID-19 Change the Research Questions we Ask? *J. Manag. Stud.* **2020**, *57*, 1763–1766. [CrossRef]

62. Bapuji, H.; de Bakker, F.G.A.; Brown, J.A.; Higgins, C.; Rehbein, K.; Spicer, A. Business and Society Research in Times of the Corona Crisis. *Bus. Soc.* **2020**, *59*, 1067–1078. [CrossRef]

63. He, H.; Harris, L. The impact of COVID-19 pandemic on corporate social responsibility and marketing philosophy. *J. Bus. Res.* **2020**, *116*, 176–182. [CrossRef]

64. Rivera, A. *The Impact of COVID-19 on Transport and Logistics Connectivity in the Landlocked Countries of South America*; Economic Commission for Latin America and the Caribbean (ECLAC): Santiago, Chile, 2020.

65. Boiral, O.; Brotherton, M.-C.; Rivaud, L.; Guillaumie, L. Organizations' Management of the COVID-19 Pandemic: A Scoping Review of Business Articles. *Sustainability* **2021**, *13*, 3993. [CrossRef]

66. Webster, P. Virtual health care in the era of COVID-19. *Lancet* **2020**, *395*, 1180–1181. [CrossRef]