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Article

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THE IMPACT OF ARTIFICIAL INTELLIGENCE ON CONSUMERS' IDENTITY AND HUMAN SKILLS

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Abstract

The development of artificial intelligence is one of the main paradigms of the contemporary society, which will radically change the existence of individuals and our society and it will have important effects on the economy. The use of artificial intelligence in the daily work of individuals and in the relationship between companies and consumers has a great number of advantages such as the increased efficiency, a high degree of fascination in interaction, but in the same time there are several fears related to its development in the future. Due to its great data storage capacity about the behavior of individuals and the processing speed of this data, there is a risk that the forms of artificial intelligence will become smarter than humans and thus intervene in the decisions made by them. Through the constant use of artificial intelligence, there is a high risk of manipulation of consumers as well as a high degree of dependence on intelligent technologies. This close relationship between the user and artificial intelligence can reduce an individual's cognitive abilities and can affect their thinking, personality and relationships with its social circle. This paper presents a mediation model between the efficiency and fascination with artificial intelligence and the consumers' perception of preserving their self-identity and human skills, having as mediator the influence and model of the social circle. The research results show that a higher degree of efficiency and fascination, as well as a positive influence from the social circle decrease the consumers' perception of reduction of human skills in relation to artificial intelligence. Moreover, the social circle mediates the relationship between efficiency and fascination produced by artificial intelligence and the perception of preserving human abilities.

Keywords: artificial intelligence, robots, consumers, social circle, consumers' self-identity, human abilities

JEL Classification: M21, M31

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Introduction

Our daily life is increasingly dominated by the presence of various forms of artificial intelligence, which accompany us in almost all activities. From finding the direction with the help of GPS, to monitoring our heart rate during sports activities, we always have a smart device that monitors our activity and makes recommendations for a better life. This trend of automation is also found in the relationship with companies that provide us with various products and services. For example, to communicate better with the mobile phone, we have Siri for Apple phone users (Apple, 2020) or Bixby for Samsung users (Samsung, 2020), while for banking services we communicate with George as the bank's interface (BCR, 2020). This trend of using robots or artificial intelligence systems is increasingly present in the daily lives of consumers and in the relationship they have with various companies. In order to better understand this interaction, it is important to know the advantages and disadvantages that the development of artificial intelligence has in contemporary society.

The objective of this paper is to determine the relationship between the influence of efficiency and fascination with artificial intelligence, the influence of the social circle and the perception of preserving the identity of consumers in relation to various forms of artificial intelligence. The presence of devices equipped with artificial intelligence in the daily lives of individuals and consumers has a number of advantages and disadvantages. In order to integrate these devices as much as possible, it is important to understand both the advantages and the disadvantages that they bring to people's lives. In this paper we will analyse the relationship between the benefits of artificial intelligence characterized by an increased efficiency and the fascination created by them and the main fears related to the human abilities of consumers. There will be also analysed the multiplying effect of the role of the social circle on the benefits created by artificial intelligence, as well as its impact in reducing the fears associated to artificial intelligence. Most of the recent studies related to the acceptance of new technologies refer mainly to the relationship between the individual and the technology (Davis et al., 1989; Venkatesh et al., 2012) and they focus less on the influence of the social circle on the perception of artificial intelligence. Although the influence of the social circle has been included in models related to the use of artificial intelligence, this has been more correlated with the evaluation of how to use them and less on the reduction of fears related to the use of artificial intelligence (Gursoy et al., 2019). The paper is structured in five parts. The first part presents the literature review with emphasis on the main variables used in the subsequent model. The second part presents the research methodology and the collection of data. The next two parts are dedicated to the confirmatory factor analysis for determining the values of the variables and the testing of the mediation model based on the previously validated variables. The last part is dedicated to the discussions and conclusions based on the results of the mediation model.

1. Literature review on the role of artificial intelligence in economics

The development of various forms of artificial intelligence and robots has been one of the biggest challenges of contemporary society. On one hand, the development of smart technologies contributes to the efficiency of the various daily activities of consumers and companies, thus shifting to a better quality of life (Pelau and Ene, 2018). On the other hand, the presence and integration of artificial intelligence into people's daily lives has long been debated (Kaplan and Haenlein, 2020).

One of the main topics of debate related to artificial intelligence is the degree of trust and acceptance of artificial intelligence by users (Hengstler et al., 2016). Several authors emphasize the importance of initial trust in these new technologies (McKnight et al., 2002; Lee and See, 2004), but also the way of integrating them into the daily work (MacVaugh and Schiavone, 2010) of individuals. Previous research has shown that the consumers' acceptance of artificial intelligence and robots depends on the specific situation in which they are used. For instance banking robots are much more easily accepted by the consumer in comparison to intelligent cooking or smart legal consulting devices (Pelau and Ene, 2020). There are several factors that affect the general acceptance or rejection of robots. The increased performance (Gursoy et al., 2019; Lu et al., 2019), the social pressure for using intelligent devices (Hall and Henningsen, 2008; Hsu and Lin, 2008), the entertainment and fascination created by the device (Fryer et al., 2017) as well as the easiness of its use (Law et al., 2018; Allam et al., 2019) are just some of the factors affecting the willingness of using intelligent devices.

Higher performance refers to the situation where robots or artificial intelligence systems can provide more services in a better, more efficient or faster way than humans (Lu et al., 2019). By doing so, robots increase people's comfort and well-being and increase companies' profits. The involvement of artificial intelligence or robots in the commercial activity leads to an increased efficiency of processes, due to their greater capacity to store information compared to human personnel, which leads to a faster processing of orders and a greater degree of personalization for customers (West et al., 2018). Hedonic pleasure and fascination refer to the positive feelings associated with the use of robots and the satisfaction of using new technologies for personal interests and entertainment (Fryer et al., 2017). Several studies consider hedonic motivation as one of the main factors that affect in a positive way and are an important facilitator of consumers' willingness to use new types of technologies such as the artificial intelligence (Law et al., 2018; Allam et al., 2019). The fascination towards artificial intelligence is important in the use of robots as an interface for communication and interaction with customers (Marinova et al., 2017; Wirtz et al., 2018). If artificial intelligence is accepted as a mean of interaction, a large number of service employees can be replaced by robots, thus increasing the efficiency and profitability of companies. For this reason, the perceived efficiency as well as the consumers' fascination towards the use or interaction with forms of artificial intelligence are important factors for their acceptance and are included in hypothesis H1 of this study, according to which a high degree of efficiency and fascination towards the artificial intelligence will increase the social pressure of using artificial intelligence and robots.

The effort involved in using robots describes the perceived difficulty of the consumer in using a new technology or a new form of artificial intelligence. In this regard, several theories have been developed that describe how to accept new technologies (Davis et al., 1989; Venkatesh et al., 2012). Several studies have shown that the difficulty depends on the ability of consumers to learn how to use these new technologies (Kim and Baek, 2018; Lu et al., 2019; Gursoy et al. 2019; Ashfaq et al., 2020).

The social circle is another important factor that influences the adoption of a technology. If more people in a social group use a new technology, the individual will be forced to use that technology (Hall and Henningsen 2008; Hsu and Lin, 2008). Consumers tend to adopt a new product or technology if the social group they belong to or want to join appreciate that product or technology. Especially when a consumer has little information about a new technology, it

tends to imitate the behavior of the social group to which it belongs (Venkatesh et al., 2012; Dabija et al., 2017; Gursoy et al., 2019). Due to the fact that the influence of the social circle is an important validation factor of a new technology, it is included in hypothesis I2 of the research presented in this article, which postulates that the impact of the social circle will decrease the perception of losing its own identity because of the use of artificial intelligence.

In opposition to this, the consumers also have negative feelings associated to robots because of their capacity of manipulating its owner, the deterioration of social relations and the threat of losing its own self-identity (Kaplan and Haenlein, 2020). One of the main fears associated with artificial intelligence is the threat of manipulation. The use of robots and artificial intelligence is closely linked to the collection of data by the system. A consumer can use a robot or a smart system only if he or she is willing to provide a series of personal data and commands to the system. Given that the robot or artificial intelligence will gather more and more information about its user, it will have the ability to learn from experience and will have the ability to influence the people's decisions (Kaplan and Haenlein, 2020). The question here is to what extent people will have the power to control these artificial intelligence systems or whether they will make their own decisions. There are already theories that forms of artificial intelligence can become smarter than their creators, through their unlimited ability to learn and store information and thus make decisions for their own interest and not in their owners' interest (Rinesi, 2015; Kaplan and Haenlein, 2020). Opinions in this regard are divided. Some authors believe that it will be a long time before robots have their own motivation and reasoning (Haladjian and Montemayor, 2016), while others consider it to be just a challenge of intelligent engineering (Graziano, 2015). Another fear related to the development of artificial intelligence is the loss of the self-identity and human abilities of individuals. The increasingly pronounced anthropomorphic characteristics of robots and our willingness to give them their own identity (by giving them names and by providing them human rights) will increase the social power of robots and may threaten people's self-identity. Anthropomorphic characteristics refer to the physical, mental and behavioral characteristics of a robot that mimics human features (Kim and McGill, 2018). On one hand, consumers may consider the human aspect to be friendlier. On the other hand, an anthropomorphic appearance could threaten people's self-identity and distinctiveness (Rosenthal-von der Pütten and Krämer, 2014). Moreover, there is a growing trend of human emotional dependence on machines or robots. Many authors predict an increased addiction to the emotional and physical relationship with gender humanoid robots (Pfadenhauer, 2015; Gonzales-Jimenez, 2018). The use of artificial intelligence and machines in communication between consumers also increases the risk of deteriorating social relations. Communication takes place more and more with the help of machines (smartphones, laptops, tablets) to the detriment of human contact.

The use of artificial intelligence in companies will have a positive impact on their profits, but at the same time more people will lose their jobs, as tasks currently performed by humans will be replaced by artificial intelligence and robots. This creates a sense of uncertainty among people and it is one of the main reasons for not accepting automation projects. The threat of replacing humans with robots is described in a model proposed by Huang & Rust (2018) based on the degrees and types of intelligence of robots. They propose several models of co-integration of humans and robots at the workplace and in the provision of services. They analyse several models of co-existence, ranging from the situation in which robots can perform tasks that humans do not want to perform, to the situation in which humans and robots are equal co-workers. It also describes a hypothetical situation in which artificial

intelligence is seen as an extension of humans and they coexist through integration (Huang and Rust, 2018). For this reason, the preservation of human abilities, following the use and interaction with the forms of artificial intelligence is included in hypothesis I3 of this study and in the mediation model, by which a degree of efficiency and fascination towards artificial intelligence decreases the perception of losing its own identity because of the use of artificial intelligence and robots.

The use of artificial intelligence and robots in the daily lives of consumers is associated with positive emotions and attitudes, but also with fears and negative feelings about the directions in which they will develop. In this paper we propose a mediation model that tests the extent to which positive aspects of efficiency and fascination towards robots alleviate negative feelings about the loss of identity and human skills in the relationship and interaction with various forms of artificial intelligence.

2. Methodology

The main scope of this research is to determine the relationship between efficiency and fascination of users towards artificial intelligence, the influence of the social circle and the pressure to use various forms of artificial intelligence and the perceived threat of losing self-identity and human skills through the use of artificial intelligence and robots. For this scope, there have been defined several objectives and a mediation model has been designed, having the following hypotheses:

The first objective refers to the influence of the perceived benefits of using artificial intelligence, which will increase the number of those who use such devices in the everyday life. As more people use artificial intelligence devices, there will be a social pressure to expand their use. Therefore the first hypothesis is formulated as follows:

1st Hypothesis (I1): Increased efficiency and fascination towards artificial intelligence increases social pressure to use forms of artificial intelligence and robots.

The second objective refers to the impact that the spread of artificial intelligence has on the consumers' fears, namely to reduce human skills because of the use of artificial intelligence. The more the use of artificial intelligence becomes a common phenomenon, the more it will become a common activity and it will become part of the daily routine of consumers and individuals in general. For this purpose, the second hypothesis has been formulated as follows:

2nd Hypothesis (I2): The impact of the social circle reduces the perception of losing self-identity while using artificial intelligence.

The third objective refers to the direct influence that the advantages brought by artificial intelligence have on the reduction of human abilities. The benefits perceived by the consumer reduce the fears that they have in relation to artificial intelligence and increase the positive perception of their acceptance. For this, the third hypothesis was formulated:

3rd Hypothesis (I3): An increased degree of efficiency and fascination towards artificial intelligence reduces the perception of losing self-identity caused by the use of artificial intelligence and robots;

The last objective integrates the relations presented in the previous objectives and postulates the mediation model, formulated in the following hypothesis:

4th Hypothesis (I4): The impact of the social circle mediates the relationship between the perceived degree of efficiency and fascination towards artificial intelligence and the perception of losing self-identity through the use of various forms of artificial intelligence. (Figure no. 1)

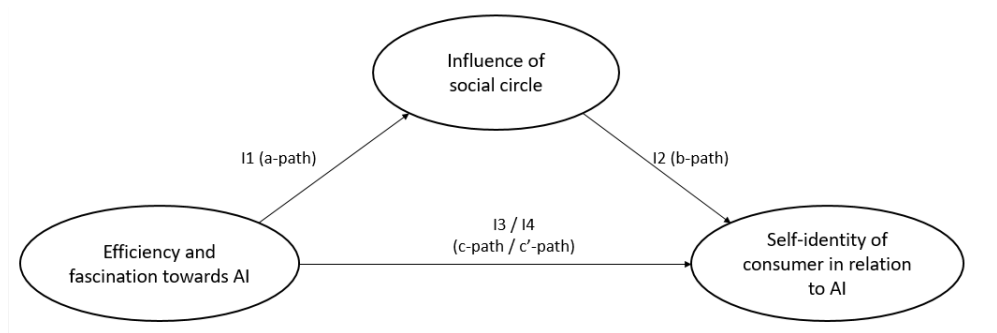


Figure no. 1: Proposed mediation model

In order to confirm this model from an empirical point of view, a quantitative research has been carried out which had as objective the evaluation of the three variables included in the mediation model. The questionnaire included 24 items with statements about the users' attitudes and perceptions about the efficiency and fascination experienced while using artificial intelligence, the influence of the social circle on the peer pressure of using artificial intelligence and the perception of losing self-identity and human abilities by using artificial intelligence. The evaluation of the 24 statements was performed using a Likert scale with values between 1 and 7, 1 representing total disagreement, and 7 representing total agreement. The research took place in December 2019 and the subjects have been selected randomly from the adult urban population, with the condition that there is a homogeneous distribution by gender. The sample contained 740 valid responses and has a total Cronbach-Alpha value of 0.901. The structure of the questionnaire includes similar values for women (50.5%) and men (49.5%). The majority of the subjects have ages between 20 and 30 years (61.6%), being complemented by subjects with ages between 30 and 40 years (14.3%), 40 and 50 years (7.5%), 50 and 60 years (11.6%), more than 60 years (1.8%) and less than 20 years (2.9%).

In order to determine the inclusion of the items to the three variables, a confirmatory factor analysis has been performed. Based on the obtained results, the values of the variables included in the model in figure no. 1 have been calculated and the hypotheses and the mediation model have been tested. The results of the two analyses are presented in the following chapters.

3. Results of the confirmatory factor analysis

The value of the Kaiser-Meyer-Olkin indicator $KMO = 0.896$ as well as the value of $p = 0.000$ of the Bartlett test show an appropriate adequacy of the items used for a factor analysis. The analysis of the loadings of items indicates an ideal number of 3 factors as it can

be seen in table no. 1. It should be noted that in order to determine the three factors, all items with values greater than 0.600 have been taken into account.

The first factor contains items related to the high degree of efficiency obtained from the use of artificial intelligence (4 items), to improving the quality of life (3 items), about the fascination of using artificial intelligence (2 items), the desire to use a robot or some form of artificial intelligence (3 items) and the desire to learn commands for the use of artificial intelligence (1 item). This factor contains the largest number of items (13), due to the correlation between the statements related to efficiency, fascination, and desire to use and learn commands for artificial intelligence. The Cronbach-Alpha value $\alpha = 0.912$ shows a high relevance of the items in this factor. The average value of the items is $M = 4.906$.

Table no. 1: The results of the confirmatory factor analysis

	1st Factor	2nd Factor	3rd Factor
The robot is more efficient in carrying out activities	.706		
The robot has a higher accuracy in performing tasks	.704		
There are fewer errors if the tasks are performed by robots	.605		
The robot performs activities more quickly	.629		
The activities performed by the robot make my life easier	.687		
I have more free time because of the robot	.672		
I can focus on complex activities, if the robot helps me with certain tasks	.667		
The interaction with the robot is fun	.700		
The interaction with the robot is fascinating due to the degree of novelty	.637		
I am willing to learn the necessary commands to optimize the activity with a robot	.647		
I like to interact with a robot that helps me in daily activities	.727		
I want to have a robot to help me in my daily activities	.702		
I am willing to buy a robot to help me in my daily activities	.651		
All my friends have robots that help them in their daily activities			.621
All the people I appreciate use robots for their daily activities			.626
I don't think I'm addicted to robots		.645	
I consider that the activity with the robot does not affect my personality		.728	
I believe that working with the robot does not reduce my human abilities		.705	

The second factor includes 3 items related to the dependency on artificial intelligence, the reduction of human abilities and personality determined by the use of robots. All items in this factor are formulated with the help of a negation, so a higher value indicates a greater disagreement. For this reason the variable was called “reducing the degree of self-identity caused by the use of artificial intelligence”. It should be noted that items related to communication and interaction with others do not correlate in this factor. The Cronbach-Alpha value $\alpha = 0.834$ shows a good adequacy of the items for this factor. The average value of the items is $M = 5.031$. This variable can be also found in other studies such as Huang and Rust (2018) or Kaplan and Haenlein (2020). Both articles present a slightly pessimistic variant of the direction of development of artificial intelligence, by which they aim to draw a signal to the dangers that may occur from their evolution.

The third factor contains two items related to the way in which the social circle uses robots and other forms of artificial intelligence. It is interesting to note that this factor correlates only based on the model taken or imitated from others, namely “all my friends” and “all the people I appreciate use robots in daily activities” and does not include items related to how the respondent is appreciated by others. For this factor Cronbach-Alpha has a value of $\alpha = 0.867$, proving a good fit, and the average of the items is $M = 3.182$.

Out of all items, only 6 statements did not have loadings greater than 0.6 for any of the three factors resulted from the confirmatory factor analysis, so they were not used in the subsequent mediation model. In spite of the fact that that one of the most common ways to use intelligent devices is found in the consumers' way of communication, by using smartphones or smart tablets, the two items related to the interference of artificial intelligence in interpersonal communication does not correlate in any of the determined factors. This situation requires further investigation in future research.

4. Results of the mediation model and discussions

Based on the three variables obtained in the confirmatory factor analysis, the mediation model has been developed with efficiency and fascination towards artificial intelligence as an independent variable, the influence of the social circle as a mediator and the perception of losing self-identity by using artificial intelligence as a dependent variable. The mediation model has been tested using the Bootstrapping method based on 5000 distinct samples for a confidence interval of 0.95. This has been done by using the Process Macro, developed by Hayes (2018) in SPSS 20.0. The obtained results can be observed in Figure no. 2.

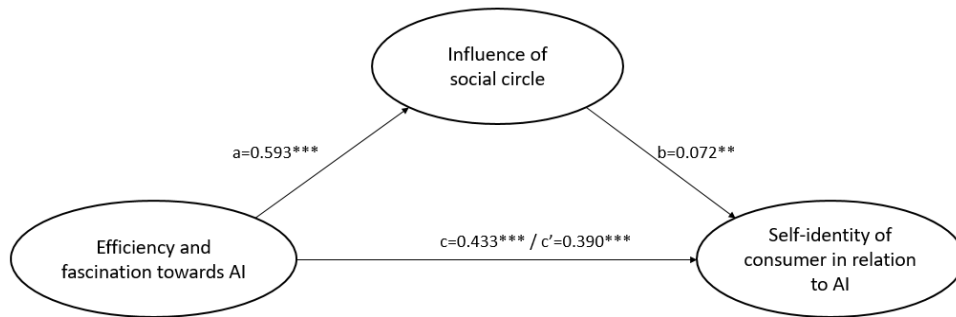


Figure no 2: Final mediation model

It can be observed that there is a significant positive a-path relationship between the independent variable efficiency and fascination towards artificial intelligence and the mediator influence of the social circle, having $\beta_a=0.593$, $p=0.000$ and the confidence interval $CI_a = [0.488; 0697]$. An increased degree of efficiency and fascination towards artificial intelligence creates models in society that use these new forms of technology and can become an amplifier in the way artificial intelligence is promoted and accepted. This confirms hypothesis I1 that a high degree of efficiency and fascination towards artificial intelligence increases the social influence of using forms of artificial intelligence and robots.

There is also a significant positive relationship for the b-path, between the mediator and the dependent variable related to losing self-identity by using artificial intelligence. This

relationship has a coefficient $\beta_b = 0.072$, $p = 0.024$ and a confidence interval of $CI_b = [0.009; 0.135]$. The fact that friends or admirers use forms of artificial intelligence reduces the perception of dehumanization caused by the use of artificial intelligence. These results confirm hypothesis I2, namely that the impact of the social circle reduces the perception of losing self-identity while using artificial intelligence.

The direct effect (c'-path) between the independent variable and the dependent variable is also significant, having $\beta_c = 0.390$, $p = 0.000$ and the confidence interval $CI_c = [0.291; 0.488]$. Thus, it can be said that efficiency and fascination towards artificial intelligence positively influence the reduction of the perception of dehumanization towards the use of artificial intelligence. This result also confirms Hypothesis I3 Hypothesis 3, namely that an increased degree of efficiency and fascination towards artificial intelligence reduces the perception of losing self-identity caused by the use of artificial intelligence and robots. This result is confirmed in other research by two different variables, namely that efficiency (Gursoy et al., 2019; Lu et al., 2019) and fascination and hedonic pleasure (Fryer et al., 2017) positively influence the degree of accepting artificial intelligence.

The total effect (c-path) between the independent variable and the dependent variable has also significant values for the coefficient $\beta_c = 0.433$, $p = 0.000$ and the confidence interval $CI_c = [0.341; 0.524]$. Due to the fact that the coefficient of the total effect is higher than the coefficient of the direct effect, both being significant, it results that there is an influence of the mediator. The indirect mediation effect has a value of $\beta = 0.043$, and its significance is validated by the confidence interval $CI = [0.005; 0.083]$ and the fact that the value 0 is not included in it. This confirms the last hypothesis I4, according to which the impact of the social circle mediates the relationship between the perceived degree of efficiency and fascination towards artificial intelligence and the perception of losing self-identity determined by the use of forms of artificial intelligence. Although there is not a big mediation effect, it exists and it is significant, proving that the models from the social circle amplifies the effect of efficiency and fascination with artificial intelligence in relation to reducing fears about the loss of human abilities and self-identity. This influence is also confirmed by other studies such as Hall and Henningsen (2008); Hsu and Lin (2008); Gursoy et al. (2019), in which the social circle has an influence on the degree of acceptance of artificial intelligence. The way of correlating the variables resulting from the confirmatory factor analysis shows that the influence is given by the behavior patterns of the social circle rather than by the appreciation of others. Thus, if someone in a consumers' social circle uses artificial intelligence, there is a chance that this behavior will be imitated.

Conclusions and discussions

The results of the mediation model confirm that an increased degree of efficiency and fascination in the use of artificial intelligence, mediated by the positive influence of the social circle, diminishes the perception of loss of identity and human abilities in relation to artificial intelligence. It can be said that the benefits obtained from the use of artificial intelligence and robots reduce the fears that the consumer has in relation to them, having a series of theoretical and managerial implications.

From a theoretical point of view, the degree of innovation brought by this model is given by the inclusion of the social circle influence as a mediator in the relationship between efficiency and fascination with artificial intelligence and preservation of consumer identity. Existing

models, especially the technology acceptance model, refer to concepts that belong only to the individual or the consumer and less to the rest of the world. The results of this research show that social models of using artificial intelligence can reduce the fear of losing human identity in relation to artificial intelligence and it is a multiplier of the perception about the efficiency and fascination of smart devices. From a managerial point of view, in order to increase the degree of acceptance of robots and artificial intelligence, it is beneficial to use interaction models with robots in the communication with the consumers or with individuals in general. For services, this can be done by presenting interaction examples between consumers and artificial intelligence in advertising, which can be later distributed through traditional media channels or social networks. In order to promote the use of artificial intelligence within a company, training sessions are recommended in which this type of interaction is given as an example. However, it is important that the implementation of artificial intelligence and robots should be done with caution because there are a number of pessimistic scenarios in which artificial intelligence and robots can become smarter than their creators and control their actions. To avoid this negative direction, both consumers and policy makers need to be aware of the potential dangers so that through clear regulations they can optimize the use of artificial intelligence in contemporary society and in the economy.

One of the limitations of the research concerns the way in which the variables are correlated, especially for factor 1. The initial aim of the research was to test separately the efficiency of artificial intelligence, the consumers' fascination with it and the learning processes for their use. Based on the confirmatory factor analysis, the first two variables, respectively efficiency and fascination are correlated and thus were used as a single variable. For the availability of learning commands for the use of artificial intelligence, only one item correlates with factor 1, while the rest of the items were removed from the research.

The result obtained from the mediation model has both positive and negative valences. On one hand, consumer fears about the use of artificial intelligence can be diminished by their benefits and the influence of the social circle. This way the consumers can be easily convinced to use various forms of artificial intelligence. On the other hand, there is a risk that the well-being brought by the use of artificial intelligence as well as the positive emotions created by the fascination of their use will reduce the vigilance of consumers in relation to the potential dangers of the development of artificial intelligence. Our recommendation is to take advantage of the benefits of artificial intelligence, but in the same time to remain vigilant to the potential dangers associated with this evolution. We are aware of the fact that due to a high profitability, artificial intelligence will be increasingly present in the daily lives of consumers and in their relationship with companies. For this reason, the benefits cannot be ignored, but a clear regulation is needed for the use of artificial intelligence. The way of regulating artificial intelligence can be achieved in several ways, namely through the legislation related to the use of these technologies, through the degree of innovation of technologies but also at the level of each user. At the legislative level, it is recommended to develop rules for the operation and use of artificial intelligence by establishing what is allowed and what is not allowed to be achieved with the help of robots and artificial intelligence. Legal regulations can have a wide range of applications from ethical issues (here we refer in particular to the use of companion robots), to issues related to their rights (for example by granting citizenship to the robot Sophia and implicitly equal rights to humans) and up to the degree of autonomy of robots. From a technological point of view, we refer to the degree of innovation in the sense of the similarity to people. Of course, from a scientific point of view it is fascinating to create robots similar to humans, with similar emotions and

feelings as humans, but in the same time, the existence of these technologies create the temptation to use them for commercial purposes and it is difficult to predict to what extent these robots could be controlled in the future. On a personal level, each individual must be aware of both the benefits of a robot or a device equipped with artificial intelligence, but also of the risks to which he is exposed by granting access to personal information. For this reason, any consumer must be aware that artificial intelligence brings certain benefits that must serve the individual, and that the rights of the robot are limited (for example by the possibility of shutting down or disengaging a robot).

In conclusion, the development of artificial intelligence can be an extraordinary thing for individuals and for humanity, if, at all levels, we will know how to manage the use of robots for the benefit of humans. In the economic activity, artificial intelligence and robots will play a significant role in increasing process efficiency and reducing costs, but at the same time their implementation must be considered carefully, in order to maintain interpersonal relationships between the company and its customers or employees.

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