

# **Artificial Intelligence (AI) and Jobs: The Impact of Pandemic on Governmental Organizations in Istanbul - Turkey**

**Noha DIAB<sup>1</sup>**  
**Nicoleta ISAC<sup>2</sup>**  
**Cosmin DOBRIN<sup>3</sup>**

## *Abstract*

*Modern technological evolution, such as mobile phones, the internet, and economic development alongside the financial crises has modified the need and the behavior of the consumer at large scale. Such that these all have put increased pressure on the economy of the world and have enforced government to undertake several initiatives. The study background displays the fact that Istanbul has notably started the utilization of AI in their human resources on a routine basis. This is assisting them in making their work more manageable and easier to deal with the consumer in governmental organizations. The aim of the current study is analyzing the impact of AI on the jobs. The data has been conducted from the employees working in different governmental organizations in Istanbul where AI is being used on a routine basis. The quantitative data has been analyzed on SPSS and the findings of the study claimed that AI encompasses potential impact over sustainability, human resources, and future jobs. However, no impact has been found over the customer of governmental organization.*

**Keywords:** Artificial Intelligence, Government Organization, Sustainability, Human Resource

**JEL classification:** H19, O39

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## **1. Introduction**

The evolution of modern technology, the internet and mobile alongside the economic development and financial crises has modified the behavior and the needs of consumers and all these are putting immense pressure over the world economic along with the budget deficit (Wirtz & Müller, 2019, pp. 1077-1010). The recent global financial crises have thereby accelerated the entry of humans to the novel age by encompassing potential impact on the global economy. Such that, according to Natale and Ballatore (2020), the digital age which had begun with mobile and internet technologies has thereby begun to open their stores on the web and cloud to mobilize the base of the customer. As indicated by Rossi (2016) it drags the government for launching and initiating their e-governmental initiatives. More

<sup>1</sup> Noha Diab, Istanbul Sabahattin Zaim University, diab.noha@std.izu.edu.tr

<sup>2</sup> Nicoleta Isac, Istanbul Sabahattin Zaim University, nicoleta.isac@izu.edu.tr

<sup>3</sup> Cosmin Dobrin, Bucharest University of Economic Studies, cdobrin@yahoo.com

recently, it has been found that Istanbul has become increasingly significant in the utilization of AI to be a part of human resources in their daily work. This would further assist in easing their work by easing the dealing of consumer in the governmental organization. However, in certain cases AI is being developed to enable innovating machinery so that they can work like the human forces' jobs (Natale and Ballatore, 2020, p. 5). On the other hand, it has been further found that the amount of information which businesses receive tends to get bigger by each single day which leads toward the environment of business to analyze the big data.

## 2. Literature review

The research conducted by Desouza et al. (2020), indicated that there are different definitions of AI which are based on the discipline where they can apply the phases of AI lifecycle. Moreover, the research further claimed that the vital characteristic of AI system tends to lie under the component of technology which offer it with the capacity for processing the insight as well as the data in way which comprises the behavior of individual. This capacity of organization consists of prediction, planning, learning and control. Such that in practical means, the system of AI consists of models and algorithms which generate the abilities (Desouza et al, 2020, pp. 206-210, Bibu N.A., 2008). Similarly, it has been found that technological development specially the digitalization encompasses potential impact for the labor market. Therefore, assessing the influence of AI is critical to develop relevant policies which promote efficient market of labor for the benefit of societies, employers, and workers. For this purpose, rapid technological innovation and progress can thereby employment at large.

As indicated by the research of Montoya & Rivas (2019) the widening utilization of AI in the field of government is triggering numerous opportunities for the government across the world. There are several different conventional forms of service provision, enforcement, policymaking that can rapidly change with the initiation of AI in the public-sector eco-system and the practices. For instance, the research of Ojo et al. (2019) claimed that the governmental organization can utilize AI technologies to enhance the public service quality. The research of Toll et al. (2019) further claimed that AI is also utilized for enhancing trust among the citizens at large while it also increases the effectiveness alongside efficiency in the service delivery sector (Kar, 2015; pp. 25-30; Dwivedi et al. 2019).

Moreover, AI can be utilized by the governmental bodies to develop accurate forecasts and to operate the complex system more efficiently. This also enables experimentation with different policy options. The research of De Sousa et al. (2019) claimed that the values can be developed in different functional area of the governmental areas such as public health, transportation, decision-support, and enforcement of law (Margetts & Dorobantu, 2019). Similarly, the research conducted by Al-Mushayt (2019) demonstrated that the utilization of AI in the sector of government tends to create increased levels of challenges. Such that the utilization of AI in the governmental sector enhance the trust of citizen and lower the trust in

government and on the governmental decision (Sun & Medaglia, 2019). However, this decline might be because of the violation in the privacy of the citizen or the lack of fairness in the utilization of AI pertinent to public governance (Kuziemski & Misuraca, 2020, M. R. Gabor et al, 2021).

The research of Ben Rjab, A., & Mellouli (2019) further indicated that there also arises enormous challenge pertinent to the utilization of AI such as lack of transparency in the decision-making by government (Dignum, 2017). Hence, such kind of realities has increased the stake for the government as the failures because of AI utilization in government might encompasses negative impact over the society and the government. For this purpose, the research aimed to address the need of the study by exploring the influence of AI on the future of the job within the governmental organization. The study aimed to attain this by studying the case of Istanbul-Turkey because there is wide knowledge gap in the research field pertinent to the impact of AI on governmental institutions.

Firstly, according to Desouza et al. (2020) since the past few years AI adoption in the sector of public has been slower as compared to the private sector. As an outcome, there is lack of attention on the use of AI in the governmental sector.

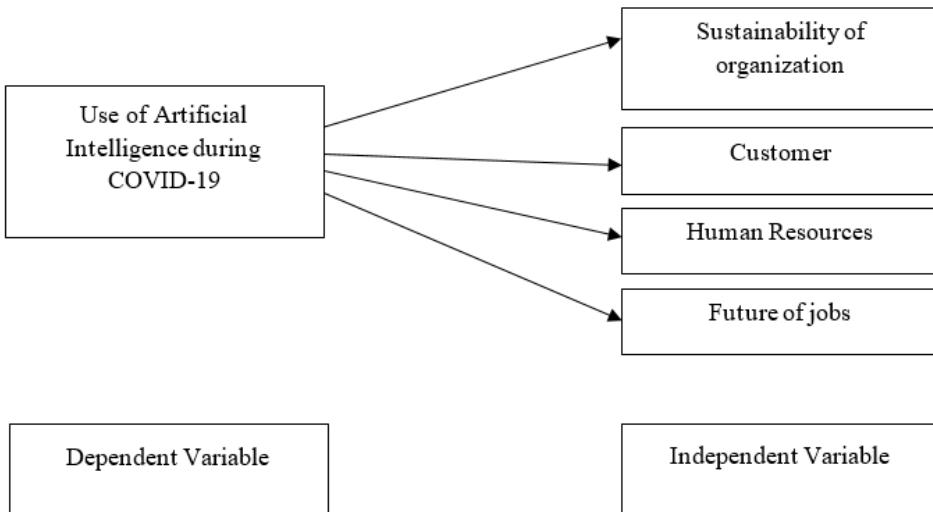
Secondly, the strategies pertinent to digital transformation and the practices of AI cannot be copied directly toward the public sector. It is because the sector of public needs to maximize the value of public. Consequently, in comparison to the private sector there is limited knowledge in the public sector concerning the challenges of AI (Aoki, 2020).

Similarly, the research of Hernández-Orallo (2014) claimed that the system of AI is becoming less predictable and complex. However, it is not clear to most governments how it influences public governance. Hence, in practice, most governmental organizations encompass understanding pertinent to the multifaceted impact of AI in the sector. This leaves a wide gap as the barrier in critical development as most of the governmental bodies wrangle with the ethical, political, economic, and societal impact of these AI transformations.

Thirdly, most of the already existing research of AI is technical in nature pertinent to technological solutions and problems in the domain of computer science. Such that there also exist different studies concerning the utilization of AI in governmental organizations which exist beyond the technological field of study (Kankanhalli et al. 2019; Etscheid, 2019).

### **3. Conceptual Framework**

In the face of the global pandemic, the effects of artificial intelligence on jobs increased and the health crisis is accelerating changes, which will alter both the way we work and the way we think about work.



**Figure 1. Conceptual Framework**

The above conceptual framework has been developed based on the aim and the objective of the study. The dependent variable in the current research is Artificial intelligence while it has particularly emphasized the utilization of the phenomenon during COVID-19. On the other hand, the independent variables for the research are sustainability of the organization, consumer, human resource, and future of jobs to determine the impact in the long run.

Based on the above conceptual framework below hypothesis has been developed:

H1: Use of AI during COVID-19 will have a positive impact on the sustainability of the organization.

H2: Use of AI during COVID-19 will have a positive impact on the consumer during COVID-19.

H3: Use of AI during COVID-19 will have a positive impact on human resources during COVID-19.

H4: Use of AI during COVID-19 will have a positive impact on the future of jobs.

### **Effects of Artificial Intelligence on the Sustainability of organizations**

The research of Mohammed (2019) demonstrated that due to the automation and business the sustainability trend related to future of working will be effectively transformed. It has been found that this automation will thereby influence the job over the next few decades. Similarly, it has been analyzed that automation will impact all the jobs to different extents depending on the work type and the nature of the job. According to the research conducted by Montoya and Rivas (2019) the extensive utilization of AI in the government sector is providing enormous

opportunity to the government across the world. Hence, the traditional form of enforcement, policymaking and the service provision can thereby modify steadily with the initiation of AI in government sector and the ecosystems of public sectors (Montoya and Rivas, 2019. pp. 1-4). Like the previous findings, the research of Ojo et al (2019) indicated that the government can utilize the technology of AI to enhance the quality of the public sector. The research of Toll et al. (2019) claimed that AI also fosters the trust of the citizen and increases the efficacy in the service delivery. Similarly, AI is also utilized by the governmental sector to develop more authentic forecasts and stimulate complicated systems. These systems increasing enable experimentation with distinct policy options. Zuiderwijk et al. (2021) indicated that the utilization of AI in the government sector is on the rise and has increased the sophistication related to AI apps. Thus, this factor has raised enormous public governance questions for the governmental bodies across the globe. Similarly, these also involve challenging and complex economic problems with regards to the labor market along with sustainable development.

### **Effects of Artificial Intelligence on Customers**

According to the research conducted by Nadimpalli (2017) the growth of AI has received significant attention and has invaded consciousness among society. Since modern times, the notion of AI has received increased discussion across the world and it is because international consumers are now accepting the idea of AI because of its frequent exposure. According to the research conducted by Sun et al. (2019) most consumers have thereby interacted with the notion of AI by reading about the factor in the media channel or through their individual experiences. The research of Mohammed (2019) also mentioned that with the AI consumer has gained increased confidence with regards to AI. It is because that the AI has left a positive impact on the consumer. The reason behind it is that most individuals are becoming much curious regarding the ideas, avenues, and the use of AI. As an outcome it has increased the awareness and interest of consumers in the domain of AI and has accepted the significant role of AI in the 21<sup>st</sup> century. Owing to the above-mentioned fact, the consumer is promoting the growth of AI as the modern reality. The research of Grewal et al. (2018) also mentioned that AI plays a vital role in the monitoring of the consumer segment on social media and other internet platforms. These platforms that are driven by the engines of AI have made sure that the consumer can now easily find their personal preferences. As a result, it has enabled the consumer to receive different advertisements through different websites which offer them the chance to find the most relevant product which they need. Moreover, the research of Nadimpalli (2017) indicated that AI enables the consumer to effectively save their data on their online platform without processes. However, with the increased AI consumers are now afraid of AI and the capabilities linked with it (Grewal et al. 2018. pp. 10-12).

## **Effects of Artificial Intelligence on Human Resources**

As per the research conducted by Kamble (2021) the AI integration with human resources has thereby improved the experiences of the candidates and workforce. Moreover, the research further indicated that the integrated software of HR has thereby simplified the process of onboarding for the new hires. The AI has thereby assisted the department of HR to analyses their resources and suggest module of training based on their job roles. The research of Hmoud, & Várallyai (2020), further mentioned that AI has impacted each aspect of life. According to the research conducted by Maduravoyal (2018), the integration of AI with HR was significant for the future performance of the organization. AI has helped the organization in diverse ways while the integration of the above-mentioned factor with the HR has benefited a lot of organization (Maduravoyal, 2018, pp. 1891-1893).

### *Talent Acquisition and Onboarding process*

According to Bhardwaj et al. (2020), AI is perceived as the most useful tool in the talent acquisition procedure of the HR department. The research further argued that AI is a useful tool as it can handle and control numerous repetitive tasks such as screening resumes, choosing appropriate resumes, answering queries, and scheduling interviews. The research of Yawalkar (2019), on the other hand stated that AI helps the professional of HR to save time from mundane tasks. They tend to emphasize more valuable tasks such as sourcing, HR marketing and engagement of employee (Yawalkar, 2019. pp. 20-22). Thus, the research of Chouhan (2021), further argued that the talent acquired through the process of AI screening will be the most appropriate and with relevant experience and skills that best suit the description of the job. Like the previous research findings, the research of Vrontis et al. (2021), mentioned that the Chatbots of AI interact with those candidates that best suit the requirement of the job. Furthermore, these AI Chatbots also assist in filtering the candidate pool to find out the desired candidate among them. Nevertheless, according to the research indicated that AI increasingly assists the HR in scheduling the interview and hiring the best possible candidate (Premnath and Chully, 2020, pp. 1193-1195)

The research of Tambe et al. (2019), reported that AI increasingly assists in improving the efficacy and the effectiveness of the onboarding procedure. The research of Premnath and Chully (2020), demonstrated that the integration of AI with the software of HR has simplify the procedure of onboarding specifically for the new hiring. The research of Vrontis et al. (2021), further claimed that the onboarding plays a vital role in lowering the attrition rate and improving the productivity of HR. For this purpose, the AI assist the HR teams in personalizing the process of onboarding to cater each of the employee as per their position. Moreover, with the help of technology the organization can set and define their algorithm based on their agenda. The research of Chouhan (2021), stated that AI assists in organizing and scheduling the program induction and sharing the relevant information of contact. Moreover, it also assists in verifying the documents provided along with the filled forms (Chouhan, 2021. pp. 2778-2780, Minculete, Gh. (2013).

### *Training and development*

According to Yawalkar (2019), AI integration into the system of HR has provided extensive benefits related to training and development. The research further stated that the integration of AI with the HR systems benefits the organization for training their personnel with regards to their field nature. The research of Bhardwaj et al. (2020), reported that AI increasingly assists in enhancing the skillset of employees. The research further indicated that the AI extensively assist the department of HR to analyses their resource skillset and provide them with a training module as per their nature of job. Moreover, the technology help in gathering the relevant data and helps the team of HR to decide concisely regarding the training which is being conducted to enhance the skills. The research conducted by Maduravoyal (2018), indicated that training and development offer a large set of skills to the employees and enhance their existing knowledge. Similarly, the leaders of HR can thereby integrate the algorithm of AI to define the path of career based on their existing skills (Maduravoyal, 2018. pp. 1890-1893).

### **Artificial Intelligence and the Future of Jobs**

According to Brougham and Haar (2018), the advances in automation, digital technologies and AI are increasingly changing the way the work was performed previously and the skills that were required to proceed. Human resources specialists say that the future will be about creative people who can make connections where most do not see any, and who can build the world and turn dreams into reality based on performance, talent and learning ability (Abrudan, 2018)

Thus, to attain the steady wave of transformation is increasingly significant to make sure the sustainable growth of organization. The report of McKinsey & Company (2020) depicted that the digital technologies has become one of the significant aspects in the growth of future economics. Such that, the report also demonstrated that the digital technology adaption is thereby accountable for about 60 per cent of the total productivity increase by the year 2030. The McKinsey & Company (2020) report further indicated that the above finding is true specifically for Turkey and this is because the digital technologies, AI and automation will have a potential boost over the economy of Turkey. Therefore, it is significant for Turkey to critically evaluate and develop the awareness related to the challenges and the opportunities that can arise in the future. Moreover, this will also assist the workforce of Turkey for the future work transformation as well. It has been further found that the Turkey has thereby worked effectively since the past 6 month to develop the report based on expertise and the experience of their 250 employees. For this purpose, the report has determined the effect of productivity growth that has been driven by automation, digital technology and AI in different occupations and sectors. The report addressed that the AI has become potential opportunity for the Turkey that will emerge to transform the talent marketplace of Turkey and to overcome the challenges. According to the research conducted by PWC (2020) AI will increasingly assist the stakeholders in prioritizing the effort toward adaptation of workplace in the future world. Automation is likely to influence the jobs that are

being held currently with limited skills of people. Vincent (2017) further claimed that the impact of AI on the job will rely on the nature of job demand. On the other hand, the growth of AI has developed a concern that in the next 10 years the employment rate is likely to increase (Smith and Anderson, 2014, p. 51).

#### **4. Methodology**

The aim of current research is to study the effect of AI on the future of job. To acquire effective and reliable information quantitative data has been used. In this regard, the answers have been conducted from 100 employees and the questionnaires were thereby distributed to attain the impact of AI on the future of jobs in the governmental organization. The sampling technique that has been utilized to recruit participants is purposive sampling. The research of Acharya et al. (2013) claimed that purposive sampling is perceived as potential strategy as it also recognized as intentional selection of participant based on their capability with regards to specific phenomenon, theme, and concept. The research also indicated that the major goal of this strategy is to emphasize on characteristic of the sample. Hence, this sampling technique has assisted in recruiting the participants that are working in governmental organizations where the AI has been integrated (Acharya et al. 2013. pp. 330-331). Similarly, this sampling method also assists the author to answer research questions. The research of Sharma (2017) claimed that the potential advantage of purposive sampling is that it allows the researcher to discuss the major impact of findings on the sample. The research of Acharya et al. (2013) claimed that the purposive sampling technique has been widely recognized as the most effective method. It is because the purposive sampling is time and cost effective as compared to other methods of sampling.

The quantitative data in the current research has been acquired through survey therefore, correlation and regression analysis has been utilized. These tests have been performed with the assistance of SPSS and the regression analysis test has been used to determine the potential impact. Frequency is used to determine the number of occurrences with regards to each response. Similarly, correlation analysis has been used for testing the association among variables along with the impact. The correlation analysis has assisted in testing the association among sustainability of organization, consumer, human resource, and the future of job. Further, the association of these variables has been tested with the main variable that is use of AI during pandemic.

#### **5. Results analysis**

Demographic analysis has been performed to study the characteristics while correlation analysis has been performed to study the relationship among the variables. Consequently, regression has been performed to determine the impact of dependent variable over the independent variable.

**Table 1. Demographic variables**

<b>Demographic Variables</b>	<b>Sub- Variables / means</b>	<b>Number of respondents</b>	<b>Percent (%)</b>
Gender	Male	43	43.0
	Female	57	57.0
Age Group	25-30	25	25.0
	36-40	46	46.0
	45 and above	29	29.0
Work Experience	Below 2 years	23	23.0
	3-7 years	20	20.0
	8 and above	57	57.0

The findings of the demographic analysis revealed that about 57% of the respondent has the working experience of 8 year and above. Moreover, about 23% of the respondent has the working experience of about less than 2 years. While 20% of the respondent encompasses the age experience of about 3 to 7 years. Therefore, it can be assumed that majority of the employees encompasses wide experience in the field of government organization. Also out of 100 participants about 57% of the participants were female while 43% of the genders were male and from the above findings it can be effectively concluded that majority of the respondent belongs to the age group of 36-40.

### **Correlations Analysis**

It has been asserted by (Coolican, 2018) that there exist different statistical tools in statistics. These tools are utilized effectively for determining the impact and the relationship among the variables. The analysis of correlation is recognized as one of the effective tools which assists in analyzing the relation among the variables. The study of Babbie et al. (2018) claimed that the Pearson Correlation is abbreviated as  $r$  which is recognized as the statistical metric. This metric is used to investigate the association among the variables. The study also claimed that the correlation value ranges from 0 to 1. On the contradictory, it is significant to mention that the Pearson Coefficient magnitude can be positive or negative.

There exist two distinct variables which can be positively or negatively linked. It is significant to note that the value of Pearson Coefficient can range from -1 to 0 and from 0 to 1 (Verma et al. 2016). The value of the Pearson Coefficient, which falls between 0 to 0.3, demonstrates a poor link between variables. On the other hand, the “ $r$ ” value which range between 0.3 to 0.7 demonstrated moderate links among the variable. Consequently, the value of  $r$  when range between 0.7 to 1 demonstrates strong link among the independent variable and dependent variable (Coolican, 2018).

**Table 2. Correlation**

		Organization sustainability	Customer	Human Resource	Future of Jobs	AI during Covid-19
Organization sustainability	Pearson Correlation	1	.855**	.816**	.500**	.167
	Sig. (2-tailed)		.000	.000	.000	.097
	N	100	100	100	100	100
Customer	Pearson Correlation	.855**	1	.968**	.423**	.327**
	Sig. (2-tailed)	.000		.000	.000	.001
	N	100	100	100	100	100
Human Resource	Pearson Correlation	.816**	.968**	1	.382**	.346**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	100	100	100	100	100
Future of Jobs	Pearson Correlation	.500**	.423**	.382**	1	.775**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	100	100	100	100	100
AI during COVID	Pearson Correlation	.167	.327**	.346**	.775**	1
	Sig. (2-tailed)	.097	.001	.000	.000	
	N	100	100	100	100	100

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

As a result, in Table 2 correlation demonstrates the relationship and link among the variables. Where the value of Pearson Coefficient indicates degree of relationship while the value of sig shows to what extent the association is significant. Also, it could be shown from Table 2 that there was a total of five variables. From which there were four independent variables while one dependent variable. The independent variables in the current study are customer, human resource, organization sustainability and the future of job. On the other hand, the dependent variable of the study is AI during COVID-19. The first variable which was tested for the association was organization sustainability. The relationship between organization sustainability and AI during COVID-19 was determined through correlation analysis. The Pearson Coefficient value for organization sustainability has been found as .167. Since the calculated value falls under the threshold of poor and weak correlation therefore it can be assumed that the association between

organization sustainability and AI during pandemic is poor. On the other hand, the value of sig has been determined as .09. The calculated value is greater than .05 therefore it can be assumed that the association between these two variables i.e., organization sustainability and the AI during pandemic is poor.

The second variable which was tested against AI was consumer. The Pearson Coefficient value which has been found for these variables is .327. As the calculated value falls under the category of moderate association therefore it can be assumed that the association between these two variables is moderate. While the value of sig for a customer has been found to be .001. Since the value of sig is less than .05 therefore it can be assumed that customer and AI encompasses moderate but significant association.

The third independent variable of the study was human resources. The value of Pearson coefficient for human resources is found as .346. The r value falls under the category of moderate association. While the sig value for human resources has been found as .000 which is less than .05. Hence, it can be assumed that the relationship between human resources and AI is moderate but significant.

Nonetheless, the last variable which is tested in correlation analysis is the future of jobs. The findings indicate that the value of Pearson Coefficient is .775. Since the value calculated falls under the category and threshold of strong relations, it can be positively assumed that the association between future jobs and the AI is increasingly strong. On the other hand, the value of sig was found to be .000. Thus, with regards to the future of jobs and AI it can be assumed that the association between these two variables is strong and significant. From the overall findings of correlation analysis, it can be assumed that the association between organization sustainability and the AI has been found to be poor and insignificant. On the contradictory, customer and human resources encompasses moderate and significant association with AI. While there exists a strong and increasingly significant association among the future of jobs and AI.

### **Regression Analysis**

The study conducted by Kafle (2019) asserted that the analysis of regression is a significant tool which is used for estimating the relationship between the dependent and the independent variables. The study also asserted that the analysis of correlation is used to determine the relationship among the variables. Whereas the regression analysis is utilized to review the influence of one variable over the other. The results under the analysis of regression are categorized under three significant stages. These stages comprise Model Summary, ANOVA, and the table of coefficient.

**Table 3. Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.911 <sup>a</sup>	.830	.823	.42486

The first and the foremost aspect of regression analysis is model summary. This aspect aimed at covering two potential aspects, R-Square and R. The value of R tends to suggest the model fitness i.e., how fit the model is for the analysis. While the value of R-Square denotes the degree to which independent variable can assist in predicting the dependent variable. Thus, based on the above Table 3 it can be effectively assumed that the value of R in model 1 is .911. This means that the model is 91% fit and considerable for conducting the analysis. On the contradictory, the R-square value is 83%. This means that independent variables i.e., future of jobs, human resources, customer, and organization sustainability can thereby adequately predict the dependent variable i.e., AI during pandemic.

**Table 4. ANOVA**

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	83.789	4	20.947	116.045	.000 <sup>b</sup>
Residual	17.148	95	.181		
Total	100.937	99			

ANOVA is recognized as the second stage of regression analysis. It is widely known as one of the notable means to elaborate and discuss the nature of the model. This means this table aimed at determining whether the nature of model is insignificant or significant. The ANOVA table is also considered as the analysis of variation. This table widely aimed at suggesting that the extent to which variation can be accepted during regression analysis. Such that in statistics about 5% of the variation is accepted to claim for the significance. Therefore, it has set the threshold that the value of variable needs to be less than 0.05 to be significant. It can be observed from the above table whether the nature of the model is significant or not. While, if the value of sig under this table observed higher than .05 this denotes that the model nature is not significant. Since the sig value in the above Table 4 of ANOVA is .000 therefore it can be assumed that the nature of regression model in this study is significant for the analysis.

**Table 5. Table of Coefficient**

Model	Unstandardized Coefficients		Standardized Coefficients Beta	T	Sig.
	B	Std. Error			
1 (Constant)	.056	.110		.509	.612
Organization sustainability	-.915	.090	-.873	-10.203	.000
Customer	-.034	.197	-.033	-.171	.864
Human Resource	.759	.178	.728	4.260	.000
Future of Jobs	1.375	.071	.947	19.303	.000

Once the ANOVA table is interpreted and analyzed the next stage of the analysis is Coefficient table. Table 5 shows how the independent variable can be influenced by dependent variable. In other words, the table of coefficient aimed to

determine the impact of dependent variable over the independent. Therefore, as it has been examined that the current regression model is fit and significant, the next stage is to determine the impact of variables and the significance. Under this context, the value of threshold which is set for significant value is .05. From the above table of Coefficient, the impact of dependent variable over each variable. The first variable listed in the above table of coefficients is organization sustainability. From the above Table 5 it can be viewed that the value of Sig for the organization sustainability is .000. This indicates that the AI during COVID-19 encompasses significant impact over the organization sustainability. The sig value for the second variable is identified as .865. Since the calculated value is greater than .05 therefore it can be assumed that the customers are not impacted by the AI during COVID-19. The sig value for human resources and for the future of jobs is .000. Since the value calculated for both the variable is less than .05 therefore it can be assumed that AI encompasses significant impact over the future of jobs and human resources.

## 6. Discussion

The current research utilized a deductive approach as it has aimed to test the hypothesis. In the current research four potential hypotheses have been developed. The first hypothesis stated that the use of AI in pandemic will encompass potential influence over organizational sustainability. Consequently, this approach has also helped in testing the second hypothesis which indicated that the utilization of AI will encompass potential influence over the consumer. The third and fourth hypothesis aimed at analyzing how the use of AI at the times of pandemic will have impact on human resources and future jobs. The approach has increasingly helped in the current research as this approach is deemed to be perceived as significant. Moreover, it has also assisted performing deductive reasoning based on quantitative investigation. This approach has widely helped in testing the data and the hypothesis in a statistical way.

### *Evaluating the influence of AI over organizational sustainability.*

The findings of the quantitative analysis revealed that AI has influenced the economic dimension such as it has led the country toward a rise in unemployment. Further, it has also been found through quantitative findings that AI has influenced the individual dimension such as emotional wellbeing and work efficiency. Further, the social dimension including facilitation of collaboration and administration is also influenced because of AI. Whereas the study of Montoya and Rivas (2019) claimed that the wide usage of AI in the sector of government has offered increased opportunity to the government across the globe. The quantitative findings of the study demonstrated that AI encompasses significant and notable influence over the sustainability of organization (Premnath and Chully, 2020, Cristache, N et al, 2019)

### *Analyzing the influence of AI on the customers.*

The findings of quantitative analysis revealed that mixed result such that majority of the respondent agree but most of them showed neutral response. This means that the virtual assistant encompasses moderate ability to follow the command. Similarly, most of the findings revealed that AI transformed customer service with adequate automation and fast service. The findings of literature revealed by the study of Nadimpalli (2017) that AI has enabled the consumer to efficiently save their data on the online platform without processes. Thus, with the increased in the notion of AI, consumers are afraid regarding AI and the capabilities linked with AI (Grewal et al. 2018. pp. 10-12). The current findings of the study indicated that association between AI and customer is moderate, while the regression analysis showed that AI does not encompass any significant influence over the consumer. The findings of the study and the literature contradict because the literature findings by Sun (2019) indicated that the consumer interacts with AI by reading regarding them in the media or due to their personal experience.

### *Determining the different effects of Artificial intelligence on human resources*

The findings of frequency analysis revealed that most of the employees feel that the AI has modified the process of onboarding and talent acquisition. The findings of the literature claimed that onboarding has become easier for the new hiring with the assistance of integrated HR software (Premnath and Chully, 2020, pp. 1193-1195). The study of Hmoud et al. (2020) claimed that the AI has assisted the HR department to analyze their resources and suggest the training module based on the job role. The notion of AI has influenced each aspect of life. It can also be evidenced from the findings of the current study. Such that majority of the respondents believe that AI has influenced training and development on a large scale. Similarly, the findings of the current study also indicated that data privacy and information security is widely enhanced through the utilization of AI (Chouhan, 2021. pp. 2778-2780). More precisely, the regression findings demonstrated that AI has influenced HR operation at large scale. It can be evidenced from the study of Yawalkar (2019) that the integration of AI in the HR system has offered increased benefit pertinent to development and training. Another study by Bhardwaj et al. (2020) claimed that the notion of AI assists in improving the skillset among the employees' a large scale. The study findings also indicated that AI tends to assist extensively for analyzing adequate skillset and offer them with the training as per the job nature. Another study by Acemoglu and Restrepo (2019), asserted that the firm requires understanding the significant target market and developing the plan accordingly for attaining the goal of organization. Thus, the integration of AI with HR has proved to be significant (Maduravoyal, 2018. pp. 1890-1893).

### *Analyzing the potential impact of AI over the future of jobs.*

The findings of the current quantitative analysis indicated that AI has significant influence over the future of jobs. Moreover, AI is expected to influence

job satisfaction as well. It can be evidenced by the study of McKinsey & Company (2020), that the automation encompasses the potential for enhancing the emergency response, environment, education, healthcare, and traffic (Chouhan, 2021. pp. 2778-2780). It can also assist in lowering the hazards at the workplace, making housing more affordable and offering benefit to the consumer in a variety of ways. It has been expected that the AI has the potential to enhance job satisfaction and make the labor market more elastic. Consequently, it eventually predicted to increase productivity and the growth that is likely to be the potential driver for the economic growth in most of the mature economies.

## 7. Conclusions

The findings of the study concluded that AI encompasses significant influence over the future of jobs. The variables which are accepted in the current research are HR, future of jobs, organization sustainability and future of jobs. It can be assumed that AI does not influence customers. From the above findings it can be concluded that the utilization of AI in the governmental sector has been increased on a large scale. It can be further concluded that the notion of AI has attained increased significance across the globe. It is a fact that international consumers are now widely accepting the AI idea because of frequent exposure. Moreover, the literature findings along with qualitative findings shed light on the fact that the consumer of AI has attained increased significance pertinent to AI. It is largely because AI encompasses positive influence over the consumer. With regards to COVID-19, it can be concluded that because of the pandemic employees shift their working to home thus the utilization of robots becomes more prevalent under such circumstances. From the study findings it can be concluded that the AI can lead toward job satisfaction as it can offer the employee tools and techniques which can make their work easier in Istanbul.

The following recommendation has been made for the government that how they can improve the utilization of AI and deal with the pandemic.

- It has been found in the coming years; several employees are expected to lose their jobs. Thus, the retaining of employees might undergo increased physical and psychological pressure. Such that more employees are expected to experience unemployment due to the absence of jobs. For this purpose, some solution has been proposed and one of the significant considerations regarding the phenomenon is to increase the educational level of the employee. This can assist the employee in commencing high degree jobs which are required by automation. Such that the training schemes can be mandated to deal with the problem.
- Another recommendation to the government official is to save money and time by optimizing and automating the routine task and the processes. It tends to increase operational efficiency along with productivity. Government institutions need to develop awareness among employee that how AI can assist in making business decisions faster.

- Government officials need to offer training that how the AI can effectively streamline the workflow and ensure effective project management. They need to understand that AI can lower time-consuming, monotonous tasks by developing intelligence and automated tools.

- To execute effective utilization of AI in governmental organizations. The employees at government organizations need to adhere to the potential standard. Such that they need to be flexible to keep pace with innovation. Secondly, they should focus on the areas with large utilization of scale which can address the particular risk and the influence.

- Moreover, the government can utilize AI to assist the public member in interacting with government and accessing the services of government. For instance, these can assist by answering queries through online Chatbots. This can assist in directing the requirements to the area of government and filling out forms.

- The government needs to be aware that AI can be seen as one of the effective tools for the policy maker for pursuing the data driven approach with the help of machine learning and analytic techniques. It offers a precise image regarding the needs of the country and how the problem can be resolved efficiently.

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