



Side and the Light Side of technostress Related to hotel Innovations: Transforming the hospitality industry or threat to human touch

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Abstract

Smart technology is becoming increasingly important in the tourism industry, particularly in light of recent advances in information and communication technology and the use of artificial intelligence techniques in a variety of fields, including the hotel sector. Technologies such as robots (R), artificial intelligence (AI), and service automation (SA) (RAISA) are widely used in the tourism and hospitality industries throughout the world. Although research in this area is gaining traction, it has been largely ignored in the Egyptian tourism and hospitality industries especially, the hotel sector

The purpose of this research is Answer to the following question "How does technological change and technostress during artificial intelligence adoption in the hotel sector affect employees' performance". To complete this research, data were gathered from managers and employees working in five-star hotels in greater Cairo, Egypt, while primary data was gathered through an empirical study conducted by questionnaire on a convenience sample of employees and managers in hotels, and the data were analyzed using frequencies and descriptive analysis. Finally, using SPSS version 25, simple linear regressions were used to test the impact.

The results indicate that technological change and technostress during artificial intelligence adoption in the hotel sector have a negative impact on employees' performance. This research may be considered one of the few studies that discuss the impact of technological change and technostress during artificial intelligence adoption in the hotel sector on employees' performance

Keywords: Technological Change, Artificial Intelligence, Egypt, Hotels, Employees' Performance

Introduction

Many tourism and hospitality businesses around the world became more reliant on technical progress during the end of the twentieth and start of the twenty-first centuries.

Fast technological advancement and innovation can put jobs at risk. This is not a new concern; it dates back at least to the 1930s when John Maynard Keynes proposed his "technological unemployment theory" – technological change causes job loss (Keynes, 1937). So, Technological innovations can affect employment in two main ways: by directly displacing workers from previously performed tasks (displacement effect), By increasing the demand for labor in industries or jobs that emerge or develop as a result of technological advancement (productivity effect). According to Autor *et al.*, (2003) technology can replace human labor in routine tasks, whether manual or cognitive, but it cannot (yet) replace human labor in non-routine tasks.

Furthermore, the application and adoption will be expanded soon, and technological developments in robots powered by artificial intelligence will be applied to make them more capable of serving customers in tourism and hospitality settings, as well as performing a change of jobs (Ivanov, 2019; Ivanov and Webster, 2019). Following a pilot study in the Egyptian hotel industry, there are no robots. Furthermore, the researcher stated that the hospitality sector in Egypt's vision 2030 is undergoing significant technological changes. Moreover, several services in the tourism and hospitality industries have already been automated by numerous AI software applications (Ivanov and Webster, 2019), such as those systems integrated into robots, smartphones, and computers used in various departments in hotels (Berezina *et al.*, 2019). hotels use AI to modernize and accelerate operations and actions such as responding to customer requests, preparing and serving food and beverages, check-in/out processes, room service tasks, forecasting demand, and examining customer online reviews (Ivanov, 2019; Tuomi *et al.*, 2020).

Technological developments in artificial intelligence (AI) and robotics are expected to have a profound influence on many aspects of life (International Corporate Accountability Roundtable, 2018). However, the spread of ICTs has increased employee workload, created a constant need for adaptation to new technological interventions, and created an excessive reliance on them, Employees are experiencing technological stress as a result of all of this (Wang *et al.*, 2008; Tarafdar *et al.*, 2007, 2010, 2011).

Review of Literature

Several researchers have proposed a slew of causes and consequences for technological stress. Information overload and excessive work overload are two important causative factors that which results in dissatisfied and demotivated employees and substandard work performance (Rabenu *et al.*, 2017; Tarafdar *et al.*, 2007, 2010, 2011). The quest for modern-day organizations to remain relevant has caused in an overdependence on technological interferences and a pressing need to incorporate these into their organizational processes. As a result, employees are constantly striving to adapt to these new technologies .

Employees are feeling overcome by the mental and psychological effort vital to cope with this omnipresent and all-pervasive incorporation of technology in all workflows (Tarafdar *et al.*, 2011). The term "technostress" refers to this cognitive response, which includes emotions of demotivation and sadness. However, clinical psychologist Brod was the major to coin the term "technostress" (1984) He described it as a current ailment resulting in poor health as a

result of the use of ICTs, This perception was expanded to contain stress caused by an employee's inability to meet organizational demands for computer usage (Tarafdar *et al.*, 2007, 2010).

There could be a selection of reasons for this stress, such as constant connectivity, a variety of new applications (some of which are hard to understand), multitasking, information overload, a high level of uncertainty, job insecurities, and technical issues. (Chala *et al.*, 2018; Coupe, 2019; Tarafdar *et al.*, 2010; These causal factors could be related to the organization like an individual's job-related demands and job control. Besides job-related influences, excessive use of technology could stress (technostress).

Tarafdar *et al.*, (2007) showed a comprehensive study on technostress recognized five factors that contribute to technostress: techno-invasion, techno-overload, techno-complexity, techno-uncertainty, and techno-insecurity Technostress has grown in importance in this technological era, and as a result, there has been extensive examination on the factors that cause it, as well as the consequences. For instance, Shu *et al.*, (2011) have explored how cognitive factors such as technology dependence and self-efficacy can lead to stress; while Ayyagari *et al.*, (2011) proposed that technological features could cause stress.

Tarafdar *et al.*, (2007, 2014) have examined the impact of all five factors causing technological stress on employee performance they also highlighted that the negative effects of technological interventions such as AI can amplify some dysfunctional arenas of role overload and role conflict. These results validate that employee productivity and technostress are inversely related. Tu *et al.*, (2005) and Wang *et al.*, (2008) It was suggested that the techno-overload factor had a positive effect on productivity (due to cultural differences), and that centralization and innovation had an impact on employee levels of technostress. As a result, another area of exploration that opens up for a more in-depth understanding is how AI applications in the hotel sector cause technostress

Employees' performance, In short, Job performance can be defined as the behaviors that employees show at work that result in the achievement of the organization's desired outcomes in terms of quality, quantity, and time of work. (Na-Nan *et al.*, 2018). According to Peterson and Plowman, (1953) Meeting the set criteria and standards for procurement, production, quality inspection, and delivery of goods and services constitute job quality it includes achieving a larger number of tasks and improving the quality of work, achieving the work within the required specifications, and improve work continuously. Job quantity refers to the output units produced researchers shows that employees' actions, such as product quantity, waste quantity, and sales figures it includes achieving a larger number of tasks, reducing workload, and Artificial saving time. Job time concerns the amount of time required to complete work-related activities about the task's difficulty it includes helps to save time, provide effort, and achieve greater flexibility in work shown in figure(1).

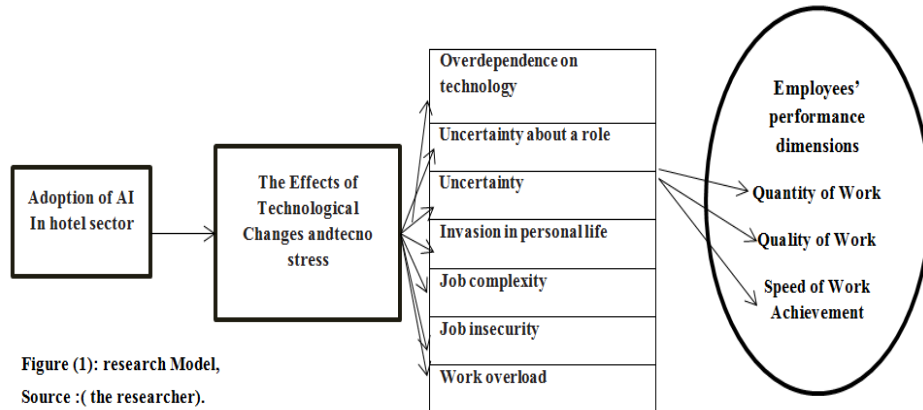


Figure (1): research Model,
Source :(the researcher).

Methodology

The researchers had a thorough discussion with AI experts from various hotels regarding the original questionnaires relating to AI dimensionality before the survey. To confirm the validity of the questionnaire and ensure a survey completion time of fewer than 15 minutes to minimize respondent fatigue, a pilot test was conducted with 20 randomly selected employees who have worked with AI tools in hotels after this testing, the questionnaire was modified based on feedback provided by these participants. Rewording the items to make them clearer was one of the changes, and simplifying complex sentences to improve face validity and readability. To accomplish the objectives of this research, a quantitative approach was applied; a questionnaire was designed to investigate the technological change and technostress during artificial intelligence adoption in the hotel sector's effect on employees' performance dimensions.

The researchers was unable to determine the size of the sample used in the study because there are no statistics on the number of employees in five-star hotels in Greater Cairo. We used a convenience sample as well as a simple random sample. In the current research, only one Arabic copy of the questionnaire was distributed to managers and employees; the total number of forms distributed was 400; from these 400 copies, 380 forms were reached and answered; 20 invalid questionnaires were excluded. Finn *et al.*, (2000) defined population as the target audience, the group of people that you will ask to respond to your questions. This population must be reasonable in size because if you have a narrow size of population you will limit your resulting data, and if you have a large size of the population it will cost more money, time, and effort, and to overcome the study of a large population is sampling. This sampling should be representative and appropriate size from the population. This study population consists of managers and employees at five-star hotels in great Cairo city in Egypt. The sampling strategy should include details on the size of the sample, the structure of the sample, and how the sample will be chosen (Gray, 2013). It was found that the number of five-star hotels in greater Cairo city in Egypt is 28 hotels, there are 18 hotels in Cairo and 10 hotels in Giza city, *According to the Egyptian hotel Association (the hotel guide) 2020-2021.*

Results

The weighted average of the sample's replies to questions in the form of a five-point Likert scale to determine the direction of the respondents' opinions (Attitude).

Table (1): Descriptive Statistics for Technological change and technostress during AI adoption in the hotel sector impact employees

Technological change and technostress during AI adoption in the hotel sector impact employees?	Attitude	N	Mean	S.D	Percentage				
					SD	D	N	A	SA
Work overload	strongly agree	380	4.42	1.05	7.1		.8	27.1	65.0
Job insecurity	strongly agree	380	4.38	1.05	7.1		.8	31.3	60.8
Job complexity	strongly agree	380	4.31	1.04	7.1		.8	38.9	53.2
Invasion in personal life	strongly agree	380	4.37	1.05	7.1		.8	32.1	60.0
Uncertainty	strongly agree	380	4.36	1.05	7.1		.8	32.1	58.9
Role ambiguity	strongly agree	380	4.34	1.04	7.1		.8	35.3	56.8
Digital overdependence	strongly agree	380	4.34	1.04	7.1		.8	35.3	56.8
general mean	strongly agree	380	4.36						

(SD= strongly disagree, D= Disagree, N= Neutral, A= Agree, SA= strongly agree)

Table (1): Results illustrated that variables' means choice from 4.42 to 4.31; with a grand mean of **4.36** which is near to the choice (5) “strongly agree”. This result shows that strongly agree with the Technological change and technostress during AI adoption in the hotel sector impact on employees' Dimension. It is clear that most of the respondents' perceptions of the dimension of Technological change and technostress during AI adoption in the hotel sector impact employees Dimension, Was acceptable as the grand mean (**4.36**), which means that respondents strongly agree with the dimension of Technological change and technostress during AI adoption in hotel sector impact employees Dimension. And the standard deviations refer to the accepted normality of data distribution.

The standard deviation of the previous indicators illustrations that the researcher can rely on the mean to provide a meaningful representation of the data. As a standard deviation from 1.05 to 1.04 is not far off from the mean, indicating that a majority of data points are positioned close to the mean, The closer the standard deviation is to 0, the more reliable the mean is, that though standard deviation values are close to 0 which tells that there is little volatility in the sample. On the other hand, it is also found that the highest indicator for respondents is “Work overload” where its mean value is 4.42 as 94.32 %. These results agree with Tarafdar *et al.*, 2007, 2010, 2011, and 2014.

Table (2): Descriptive Statistics for Quantity of Work

Quantity of Work	Attitude	N	Mean	S. D	Percentage				
					SD	D	N	A	SA
Artificial intelligence helps to achieve a larger number of tasks	strongly agree	380	4.39	1.05	7.1		.8	35.3	56.8
Artificial intelligence helps to reduce workload	strongly agree	380	4.46	1.05	7.1		.8	30.3	61.3
Artificial intelligence helps to save time.	strongly agree	380	4.44	1.05	7.1		.8	23.2	68.9
Grand mean	strongly agree	380	4.43						

(SD= strongly disagree, D= Disagree, N= Neutral, A= Agree, SA= strongly agree)

Table (2): Results show that variables' means choice from 4.46 to 4.39; with a grand mean of **4.43** which is near to the choice (5) “strongly agree”. This result shows that strongly agree with the Quantity of Work Dimension. It is clear that most of the respondents' perceptions of the dimension of Quantity of Work Dimension, Were acceptable as the grand mean (4.43), which means that respondents strongly agree with the dimension of Quantity of Work Dimension. And the standard deviations refer to the accepted normality of data distribution. The standard deviation of the previous indicators shows that the researcher can rely on the mean to provide a meaningful representation of the data. A standard deviation from 1.05 is not far off from the mean, indicating that a majority of data points are positioned close to the mean. The closer the standard deviation is to 0, the more reliable the mean is that though, standard deviation values are close to 0 which tells that there is little volatility in the sample. On the other hand, it is also found that the highest indicator for respondents is “Artificial intelligence helps to reduce workload” where its mean value is 4.46 as 93.82 %.

Table: (3) Descriptive Statistics for Quality of Work

Quality of Work	Attitude	N	Mean	S.D	Percentage				
					SD	D	N	A	SA
Artificial intelligence helps to achieve a larger number of tasks.	strongly agree	380	4.26	1.02	7.1			44.7	38.2
Artificial intelligence helps to achieve the work within the required specifications.	strongly agree	380	4.26	1.02					
Artificial intelligence helps to improve work continuously	strongly agree	380	4.28	1.03	7.1			44.7	48.2
Grand mean	strongly agree	380	4.26						

(SD= strongly disagree, D= Disagree, N= Neutral, A= Agree, SA= strongly agree)

Table (3): Results declared that variables' means choice from 4.28 to 4.26; with a grand mean of 4.26 which is near to the choice (5) “strongly agree”. This result specifies that strongly agree with the Quality of Work Dimension. Most of the respondents' perceptions of the dimension of Quality of Work Dimension Were acceptable as the grand mean (4.26), which means that respondents strongly agree with the dimension of Quality of Work Dimension. And the standard deviations refer to the accepted normality of data distribution. The standard deviation of the previous indicators illustrations that the researcher can rely on the mean to provide a meaningful representation of the data. A standard deviation from 1.03 to 1.02 is not far off from the mean, showing that a majority of data points are positioned close to the mean. The closer the standard deviation is to 0, the more reliable the mean is that though, standard deviation values are close to 0 which tells that there is little volatility in the sample. On the other hand, it is also found that the highest indicator for respondents is “Artificial intelligence helps to improve work continuously” where its mean value is 4.28 as

Table: (4) Descriptive Statistics for Speed of Work Achievement

Speed of Work Achievement	Attitude	N	Mean	S.D	Percentage				
					SD	D	N	A	SA
Artificial intelligence helps to save time.	strongly agree	380	4.24	1.02	7.1			46.8	48.1
Artificial intelligence helps to provide effort.	strongly agree	380	4.40	1.04	7.1			30.8	62.1
Artificial intelligence helps to achieve greater flexibility in work.	strongly agree	380	4.41	1.04	7.1			30.8	62.9
Grand mean	strongly agree	380	4.35						

94.32 %.

(SD= strongly disagree, D= Disagree, N= Neutral, A= Agree, SA= strongly agree)

Table (4): Results declared that variables' means choice from 4.40 to 4.24; with a grand mean of **4.35** which is near to the choice (5) “strongly agree”. This result shows that strongly agree with the Speed of Work Achievement. Most of the respondents' perceptions of the dimension of Speed of Work Achievement Were acceptable as the grand mean (**4.35**), which means that respondents strongly agree with the dimension of Speed of Work Achievement. And the standard deviations refer to the accepted normality of data distribution. The standard deviation of the previous indicators illustrations that the researcher can rely on the mean to

provide a meaningful representation of the data. A standard deviation from 1.04 to 1.02 is not far off from the mean, showing that a majority of data points are positioned close to the mean. The closer the standard deviation is to 0, the more reliable the mean is that though, standard deviation values are close to 0 which tells that there is little volatility in the sample. On the other hand, it is also found that the highest indicator for respondents is “Artificial intelligence helps to achieve greater flexibility in work.” where its mean value is 4.41 as 95.12 %.

Research question testing

Q: Technological changes and technostress during AI adoption in the hotel sector affect employees’ performance

Table (5.1): illustrate Technological changes during AI adoption in the hotel sector on employees’ performance dimensions (quantity, quality, and speed of work).

(Quantity of work)

Table (5.1): Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.901 ^a	.812	.811	.455

a. Predictors: (Constant), technological change

The result in table (5.1) shows that, the R and R-square standards. The R-value is the correlation coefficient between; Technological changes during AI adoption in the hotel sector and employees’ performance dimension (quantity of work). (R=.901^a)It indicates a strong positive correlation between AI adoption in the hotel sector creating positive and employees’ performance dimension (quantity of work). The R2 value mentions to the coefficient of determination which specifies how much of the total variation in the dependent variable employees’ performance dimension (quantity of work), Can be explained by the independent variables' technological changes during AI adoption in the hotel sector. In this case,.812% of the dependent variable employees’ performance dimension (quantity of work) can be explained by the technological changes during AI adoption in the hotel sector. This result reflects the good influence of technological changes during AI adoption in the hotel sector on employees’ performance dimension (quantity of work). That leads to validate the assumption that employees’ performance dimension (quantity of work) is transformed/ affected by the level of changes in technological changes during AI adoption in the hotel sector as independent variables.To test the impact of the (linear) relationship between technological changes during AI adoption in the hotel sector as independent variables and

employees’ performance dimension (quantity of work) as a dependent, F- test can be used as shown in table (5.2)

Table (5.2): technological changes during AI adoption in the hotel sector on employees’ performance dimension (quantity of work)

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	337.457	1	337.457	1629.297	.000 ^b
	Residual	78.291	378	.207		
	Total	415.748	379			

a. Dependent Variable: quantity of work

b. Predictors: (Constant), technological change

The ANOVA illustrations whether the regression model significantly predicts the employees’ performance dimension (quantity of work).

From table (5.2) it is clear that $F_{1, 378} = 1629.297$ and $P < 0.01$ this means that there is a important relationship between technological changes during AI adoption in the hotel sector and employees’ performance dimension (quantity of work).

Table (5.3): simple linear Regression analysis for technological changes during AI adoption in the hotel sector on employees’ performance dimension (quantity of work).

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.343	.104		3.293	.001
	technological change	.938	.023	.901	40.365	.000

a. Dependent Variable: quantity of work

From table (5.3) it is clear that β coefficients are not equal to zero which means we still can reject the null hypothesis where t for $x_1 = 40.365$, $P < 0.01$ for x variables, It is recognizable also that $\alpha = .343$ and $\beta_1 = .938$, so: From the table (5.3) the regression model shows that were the significant effect of technological changes during AI adoption in the hotel sector as an independent variable on employees’ performance dimension (quantity of work) as the dependent variable. Also, the table clarifies why and how the technological changes during AI adoption in the hotel sector had a positive effect on employees’ performance dimensions (quantity of work).

- **Table (6.1): The relations between technological changes during AI adoption in the hotel sector on employees’ performance dimensions (quality of work).**

table (6.1): Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.822 ^a	.675	.674	.585

a. Predictors: (Constant), technological change

The result in table (6.1) shows that, the R and R-square standards. The R-value is the correlation coefficient between; technological changes during AI adoption in the hotel sector and employees’ performance dimension (quality of work). (R= .822^a)It indicates a strong positive correlation between AI adoption in the hotel sector creating positive and employees’ performance dimension (quality of work). The R2 value mentions to the coefficient of determination which shows how much of the total variation in the dependent variable employees’ performance dimension (quality of work), Can be explained by the independent variables' technological changes during AI adoption in the hotel sector. In this case, .675% of the dependent variable employees’ performance dimension (quality of work) can be explained by the technological changes during AI adoption in the hotel sector. This result reflects the good influence of technological changes during AI adoption in the hotel sector on employees’ performance dimension (quality of work). That leads to validating the assumption that employees’ performance dimension (quality of work) is transformed/ affected by the level of changes in technological changes during AI adoption in the hotel sector as independent variables. To test the impact of the (linear) relationship between technological changes during AI adoption in the hotel sector as independent variables and employees’ performance dimension (quality of work) as a dependent, F- test can be used as revealed in table (6.2)

Table (6.2): technological changes during AI adoption in the hotel sector on employees’ performance dimension (quality of work)

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	268.690	1	268.690	785.076	.000 ^b
	Residual	129.369	378	.342		
	Total	398.060	379			

a. Dependent Variable: quality of work

b. Predictors: (Constant), technological change

The ANOVA confirmations whether the regression model significantly predicts the employees’ performance dimension (quality of work).

From table (6.2) it is clear that $F_{1, 378} = 785.076$ and $P < 0.01$ this means that there is a important relationship between technological changes during AI adoption in the hotel sector and employees’ performance dimension (quality of work).

Table (6.3): simple linear Regression analysis for technological changes during AI adoption in the hotel sector on employees’ performance dimension (quality of work).

		Coefficients				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	.622	.134		4.645	.000
	technological change	.837	.030	.822	28.019	.000

a. Dependent Variable: quality of work

Table (6.3) clearly shows that coefficients are not equal to zero, showing that we can still reject the null hypothesis where t for $x_1 = 28.019$, $P < 0.01$ for all x variables, It is also clear that $t = .622$ and $t = .837$, implying: According to the regression model in the table (6.3), there was a significant effect of technological changes during AI adoption in the hotel sector as an independent variable on employees' performance dimension (quality of work) as a dependent variable. Furthermore, the table describes why and how technological changes during AI adoption in the hotel sector had a positive impact on employees' performance dimensions (quality of work).

- Table (7.1) The relations between technological changes during AI adoption in the hotel sector on employees' performance dimensions (speed of work).

table (7.1) **Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.860 ^a	.740	.739	.522

a. Predictors: (Constant), technological change

The result in table (7.1) shows that, the R and R-square standards. The R-value is the correlation coefficient between; technological changes during AI adoption in the hotel sector and employees' performance dimension (speed of work). ($R = .860^a$) It indicates a strong positive correlation between AI adoption in the hotel sector creating positive and employees' performance dimension (speed of work). The R^2 value mentions to the coefficient of determination which shows how much of the total variation in the dependent variable employees' performance dimension (speed of work), Can be explained by the independent variables' technological changes during AI adoption in the hotel sector. In this case, .617% of the dependent variable employees' performance dimension (speed of work) can be explained by the technological changes during AI adoption in the hotel sector. This result reflects the good influence of technological changes during AI adoption in the hotel sector on employees' performance dimension (speed of work). That leads to validating the assumption that employees' performance dimension (speed of work) is transformed/ affected by the level of changes in technological changes during AI adoption in the hotel sector as independent variables. To test the impact of the (linear) relationship between technological changes during AI adoption in the hotel sector as independent variables and employees' performance dimension (speed of work) as a dependent, F- test can be used as revealed in table (7.2)

Table (7.2): technological changes during AI adoption in the hotel sector on employees' performance dimension (speed of work)

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	293.223	1	293.223	1074.856	.000 ^b

Residual	103.119	378	.273		
Total	396.342	379			

- a. Dependent Variable: speed of work
- b. Predictors: (Constant), technological change

The ANOVA shows whether the regression model significantly predicts the employees' performance dimension (speed of work). From table (7.2) it is clear that $F_{1, 378} = 785.076$ and $P < 0.01$ this means that there is a significant relationship between technological changes during AI adoption in the hotel sector and employees' performance dimension (speed of work).

Table (8.3): simple linear Regression analysis for technological changes during AI adoption in the hotel sector on employees' performance dimension (speed of work).

		Coefficients			
		Unstandardized Coefficients	Standardized Coefficients		
Model		B	Std. Error	Beta	t
1	(Constant)	.540	.119		4.519
	technological change	.874	.027	.860	32.785

- a. Dependent Variable: speed of work

Table (8.3) illustrates that coefficients are not equal to zero, implying that we can still reject the null hypothesis where t for $x_1 = 32.785$, $P < 0.01$ for x variables, It is also obvious that $\beta = .540$ and $\beta = .874$, so: According to the regression model in the table (8.3), there was a significant effect of technological changes during AI adoption in the hotel sector as an independent variable on employees' performance dimension (speed of work) as a dependent variable. Furthermore, the table clarifies why and how technological changes during AI adoption in the hotel sector had a positive impact on employees' performance dimensions (speed of work).

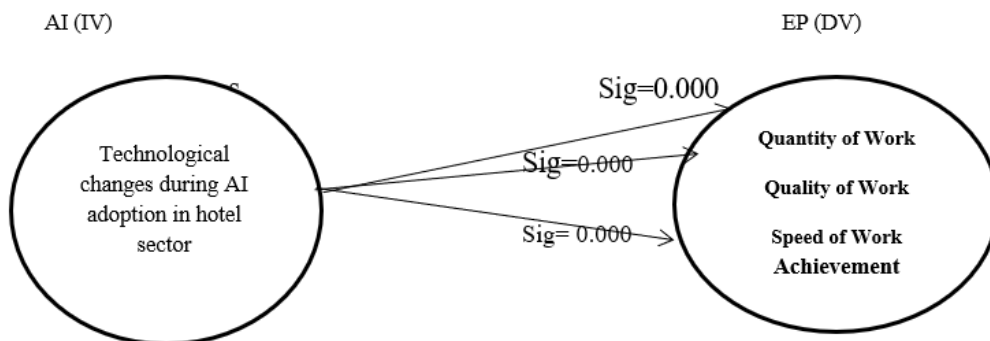


Figure (2): Summary of testing the main hypotheses, Artificial intelligence dimensions (Technological changes during AI adoption in hotel sector) on employees' performance dimensions (Quantity, Quality, and Speed of Work Achievement

Discussion

Technological change and technostress during artificial intelligence adoption in the hotel sector affect employees' performance?

Depending on simple linear regression analysis, the data illustrated statistically significant impact $\text{sig} = 0.000$, $P < 0.01$ of the independent variable Technological changes during AI adoption in hotel sector on employees performance dimensions, It means that Artificial AI adoptions in hotel sector create positive effects on employees' performance dimensions (Quantity, Quality, and Speed of Work Achievement). According to this significant impact, the study accepts the (H04) main Hypotheses. Illustration from past literature, researchers have suggested that the onslaught of technological changes has not only increased employee workload but also created a constant need for adaptation to new technological interventions and excessive dependence on them. This has consequentially led to technostress among employees. These results agree with (Wang et al., 2008; Tarafdar *et al.*, 2010, 2011). Several antecedents of technostress have been cited in the literature, some of them are information overload and excessive work overload which lead to frustrated and demotivated employees and poor work performance (Tarafdar *et al.*, 2007, 2010, 2011, 2014; Ragu-Nathan *et al.*, 2008). Further Tarafdar *et al.*, (2007) shown a detailed study on technostress and identified five factors that lead to technostress: techno-invasion (refers to an invasion into privacy and personal life by all-pervasive technology interventions and the employee can be reached anywhere and anytime), techno-overload (use of technology forces people to work more and faster), techno-complexity (complex computer systems are difficult to understand, thus understanding and learning needs a lot of power from employees, resulting in stress), techno-uncertainty (short life cycles of computer systems require employees constantly upgrading and re-learning), and techno-insecurity (employees feel threatened about losing their jobs to more technically savvy counterparts)

Table (5): correlations between the dependent variable (employees' performance dimension) and independent variable (technological change).

		Correlations			
		quantity of work	quality of work	speed of work	technological change
quantity of work	Pearson Correlation	1	.784**	.867**	.90
	Sig. (2-tailed)		.000	.000	.0
	N	380	380	380	3
quality of work	Pearson Correlation	.784**	1	.818**	.82
	Sig. (2-tailed)	.000		.000	.0
	N	380	380	380	3
speed of work	Pearson Correlation	.867**	.818**	1	.86
	Sig. (2-tailed)	.000	.000		.0
	N	380	380	380	3
technological change	Pearson Correlation	.901**	.822**	.860**	
	Sig. (2-tailed)	.000	.000	.000	
	N	380	380	380	3

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

The results in a table (5) show that, after studying the previous table, note that the dependent variables, employees' performance dimensions (Quantity, Quality, and Speed of Work Achievement) and independent variable technological change, Have a very high statistical significance less than or equal to 0.000 note that (quantity of work, technological change) are strongly correlated and (speed of work) are less correlated then (quality of work) are less correlated.

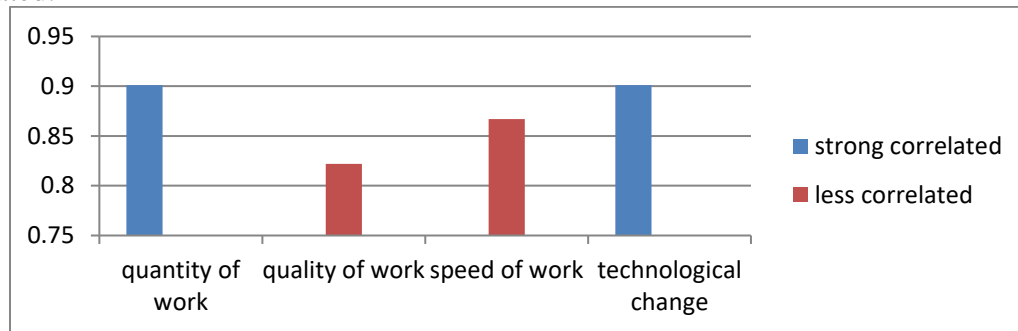


Figure (3): shows that (quantity of work, technological change) are strongly correlated and (speed of work) are less correlated and (speed of work) are less correlated then, (quality of work) are less correlated, source: (the researcher)

Conclusion and Future Research

Artificial Intelligence is the most recent technological trend that is increasingly being integrated into our daily lives. Artificial intelligence is used in a variety of fields. As a result, one of the most important fields to benefit from these technologies is. On the other hand, it threatens to replace jobs. The results of this research show that technological change and technostress during artificial intelligence adoption in the hotel sector have a significant

impact on employees' performance. It is recommended that such a study be shown on the same industry in other countries, particularly Arab countries because they have similar social and cultural lifestyles.

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