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Digital transformation and cognitive biases of financial planners

Hamid Rostami Jaz[1], Narges Sabouri[2]
1. Assistant Prof., Department of Accounting and Financial Management, Faculty of Humanities, Islamic Azad University, Bandar Abbas, Iran
2. Ph.D. Candidate of accounting, Faculty of Humanities, Islamic Azad University, Bandar Abbas, Iran

Abstract:
Objective: Companies are trying different ways to reduce cognitive biases by financial planners, it is likely that digital transformation and the use of digital technologies can reduce cognitive biases as much as possible and lead to improved performance and company reports; Experimental studies in Iran have shown that little research has been done in the field of cognitive bias, but there was no research that shows that digital transformation can reduce the cognitive biases of financial planners. In order to reduce cognitive biases and improve investment decisions, companies have turned to digital transformation and expertise in order to achieve better performance. Therefore, this study was conducted with the aim of determining the impact of digital transformation on the cognitive biases of financial planners.
Method: The research method is descriptive-survey and applied, and the research data was collected cross-sectionally and in the second half of 2023, through a questionnaire distributed among the sample members and in a certain period of time. Companies in the south of Iran were selected as the statistical population, the statistical sample of the research including all managers, employees, financial experts in the number of 210 people were selected by stratified random method. In order to examine and analyze the data, statistical proportional methods at two descriptive levels (frequency tables, graphs, mean, standard deviation, etc.) and inferential (path analysis using the partial least squares method, structural equation modeling) and from Smart-PLS software was used.
Findings: The results of the research indicate that digital transformation has a significant effect on the cognitive biases of financial planners in companies in southern Iran. Therefore, digital transformation with regard to artificial intelligence technology, the combination of artificial and human intelligence, digital transformation in terms of service provision can affect the cognitive biases of financial planners in companies in southern Iran and ultimately lead to the improvement of the company's activities and performance.
Conclusion: According to the results of the research, it can be concluded that financial planners are influenced by transformation, and by observing it, the amount of their cognitive biases decreases and causes the amount of use of digital technologies to increase; Of course, in this regard, the role of skilled and expert human resources is not without influence and they should perform their activities based on the progress and technologies of the world. Therefore, it is suggested that financial planners and consultants adjust their plans to align with companies located in developed countries in order to reduce cognitive biases regarding digitalization and technologies.
Keywords: Service delivery, financial planners, digital transformation, cognitive bias, artificial intelligence,

I. Introduction

Considering the current situation and being in the Corona situation, some experts consider not only the increase in productivity, but also the survival of organizations and governments to depend on digital transformation. The effect of digital increase during the covid-19 epidemic is evident, because the use of digital technologies has increased due to the emergence of social distancing norms throughout the country. People all over the world have had to adapt to new ways of working and living and have been forced to work from home. In the digital age, due to the emergence of new technologies, the traditional beliefs of business have been fundamentally changed. Organizations have only one way forward and that is to keep pace with existing changes, otherwise they will be removed from the competition. Transformational technologies have marked the digital transformation of business, and digital transformation has entered business literature as a concept(Tolboom, 2016). The process of digital transformation is one of the new tricks in the field of human resources management, which has recently gained double importance with the spread of the corona virus in our country and among some government organizations and businesses in the field of digital and technology. Due to the fact that the Corona situation has brought an unprecedented crisis to the world that is undergoing digital transformation, millions of people started to work remotely to prevent the spread of the disease and maintain business continuity, and the development of virtual human resources and alternative work strategies helped organizations to adapt to the current challenges and prepare for future disruptions. Therefore, one should seek to

analyze the role of human resources development in the crisis and transition to a new period, so that in case of disruption and change, one can always help their organizations to not only survive this crisis, but also in a new period of work that is created by Technology changes, advances and increases its performance (Bennit et al., 2021). Digital transformation is not only a matter of technology, but it affects all employees and organizations. Therefore, every digital action needs coordination and alignment between technology, process and employees. Digital transformation has put a lot of pressure on organizations. What is certain is that digital transformation is a radical change and like any other organizational change, it must be managed with utmost care (Kerpa and Chiu, 2018). In Iran, considering that it is a developing country and plays a prominent role in the country's economy, and considering the remote work related to the corona epidemic and the use of digital transformation in the company's activities, it has tried to conduct studies in this field. to prove with experimental results the role of digital transformation on reducing the cognitive bias of financial planners. By empirically investigating how digital transformation can positively affect the cognitive bias of financial planners in relation to financial investment decisions. It is possible that in this study, the impact of cognitive biases on financial planners and examining how digital transformation through artificial intelligence can help overcome these biases. Therefore, the researcher seeks to investigate the aforementioned issue and answer the research question whether digital transformation has an effect on the cognitive biases of financial planners in companies in southern Iran.

II. Theoretical and experimental background of the research

Digital transformation provides the ability to access information through computer systems by converting non-digital things into digital ones. Although there is no official definition for digitalization, but in the definition provided by Gartner, digitalization is described as the use of digital technologies to change business models, provide new revenues and generate value opportunities (Gartner, 2020). Colin et al. (2015) described the idea of digitalization as a global megatrend that fundamentally changes the supply chain in all industries and public sectors; Therefore, digitalization is inevitable for companies in many industries in this era. Arseny Samuel (2010), points out that the audit profession and audit institutions must accept the effects of digitization and familiarize themselves with digital interventions and their inevitable effects. Today, one of the most well-known digital technologies is mass data analysis technology, blockchain, artificial intelligence, robotic process automation (Arseny Samuel, 2010). The right way to make any decision requires considering all available scenarios and data. But this can be time-consuming and exhausting. Sometimes there is no good reason behind an investor's decision to invest a large amount of money in the market. Historically, stock markets have crashed because of massive investments or financial crises caused by excessive lending. These behaviors are also seen in people who are involved in gambling and gambling who cannot really explain their decisions based on logical reasons. Literature shows that investors and customers of financial services exhibit cognitive biases (Gordon and Overby, 2022. Although both financial planners and clients are affected by cognitive biases, this has not been empirically explored, resulting in a research gap. Examining these biases will help us understand why people behave the way they do. Furthermore, it is still unclear whether financial planners understand and recognize these cognitive biases among their clients and attempt to address them while providing financial planning services. Financial planners try to identify cognitive biases in the provision of their services, or whether financial planning services provided need to use computational support to improve decision-making skills; And artificial intelligence is a promising strategy in this field (Callaway et al., 2022). However, from a practical point of view, many financial planners may resist the adoption of AI based on the assumption that, as in any instance where a large-scale technological advance is added, it makes people fear that destroy their jobs. On the other hand, the success of AI technology in financial planning depends on its successful adoption, which in turn shows importance in how it is perceived by financial planners. Notably, the technology inherent in AI is complex and financial planners may be reluctant to specifically look at AI as a medium for digitization as it facilitates sustainable business activity and helps it maintain a competitive edge in the field. Globalization helps (De Vaio et al., 2020). All over the world, organizations have been significantly transformed by digitization through artificial intelligence (Atuta, 2021); which plays a central role in the digitization of data processing with the aim of achieving the desired goals through flexible adaptation (Kaplan and Heinlein, 2019). This was the main focus of their study, which suggested the use of artificial intelligence to help with data analysis. In practice, digital or robotic advice increases the decision-making ability of a financial planner, and it is believed that the use of these technologies can potentially help reduce bias, as they significantly reduce human performance or interaction. However, the inherent limitations of these technologies make them unsuitable as the ultimate resource for financial planners. Robo-advice does not involve human interactions, and most clients do so from dealing with robots regarding financial matters that they may not feel comfortable with (Poley, 2018). Therefore, in many Iranian companies, digital transformation may have an effect on the cognitive bias behavior of accountants and financial planners; In this research, the digital transformation is discussed on the cognitive biases of financial planners in companies in the south of Iran; Since digital transformation causes cognitive biases of financial planners, as a result, there may be a gap in this field

that prevents the positive performance of the company; Therefore, it is necessary to address the above issue, so it seems that conducting this research is the effect of digital transformation on the cognitive biases of financial planners; It is necessary for the company and other stakeholders.

The concept of digitalization, which is practically a level higher than the concept of digital. Digitalization is the use of digital technologies that help us to mechanize a part of our organization's performance. So when we mechanized our processes through projects such as organizational architecture or process optimization projects, we actually used the concept of digitalization. Digital transformation covers a higher level with a wider range of concepts and actions. Of course, it should be noted that different people have different interpretations of the term digital transformation. For example, from the point of view of a digitization or information technology manager, digital transformation is the evaluation of emerging technology and methods of using them to improve the company's business performance. The marketing manager looks at digital transformation as a tool to better interact with potential and actual customers of the company. The CFO sees digital transformation as an opportunity to reduce costs, and the vice president of corporate operations sees digital transformation as a way to optimize the company's operations. In this study, digital transformation includes artificial intelligence technology and the combination of artificial and human intelligence.

Cognitive errors are mental errors that systematically lead to tendency, attitude, illusion or false belief and affect people's decision-making, reasoning, evaluation, recall, perception and cognition. Cognitive bias is one of the important topics of cognitive science. Cognitive science has identified a large number of these mental errors and examined different angles of the conditions of their occurrence. The list of types of cognitive errors is very long. Cognitive biases are based on all innovative patterns and algorithms that are born in humans for learning, problem solving and decision-making, and cause deviations from reality, which results in conclusions related to the decision-making process. They may be irrational. The basis and history of cognitive bias by John et al first stated that people always have a certain set of preferences and try to make decisions simpler and usually use a series of innovative predetermined patterns and algorithms. Cognitive bias are the deviations and mistakes of the mind when making correct judgments. These biases or perceptual errors are often studied in psychology and behavioral economics. In other words, it can be said that any errors and mistakes in decision-making, information evaluation, and remembering that are in the form of mental patterns are called "cognitive bias" or "perceptual error". Studies by Professor Karen Wayne and her colleagues at Yale University on one, two, and three-year-old children have shown that human children have in-group bias since birth. In addition to supporting those who are similar to themselves, the studied children disliked those who were not similar to themselves. Studies show that people tend to punish those who are not like them from childhood. Professor "Wayne" says that for the child from birth, there are two groups, us and others. The Implicit Project (Implicit Association Test) by Anthony Greenwald from the University of Washington and Mehzerin Bunji from Harvard University shows that all humans are subject to bias and there is no such thing as a human without bias. Therefore, knowing these perceptual errors is necessary to avoid them. As Rutuf Dubli says: If we can recognize the great errors of thought and mind and avoid them in our private life, social relationships and work, we will probably make a great leap towards success. For such a leap, it is not necessary to be smarter, much more productive. Or be equipped with new ideas and special tools. All you need is to avoid the errors of the mind, that is, to avoid wrong thinking.

Yadolahi and Selukian (2023), investigated the effect of trading experience on behavioral and cognitive biases during trading with the mediating role of self-reflection and moderation of authentic relationships with advisors, authentic relationships with peers, and the desire to learn (case study: Tehran Stock Exchange customers) . The results of the research show that the variables of trading experience on behavioral biases when trading with the mediation of self-reflection, trading experience on self-reflection with the moderation of authentic relationships with a consultant, trading experience on self-reflection with the moderation of authentic relationships with peers, trading experience on self-reflection with the moderation of desire to learn, experience Trading on self-reflection, self-reflection on behavioral biases when trading authentic relationships with peers has a significant effect on behavioral biases when trading. Based on this, self-reflection has the greatest impact on behavioral biases during trading, and trading experience has the least impact on self-reflection with the moderation of desire to learn.

Dadashi et al.(2022), presented the cognitive and behavioral bias model of mental accounting decision-making based on psychological components through structural equations. They showed that cognitive and behavioral biases cause changes in mental decision-making based on psychological components. The weakness of economic theories in explaining people's behavior in decision-making situations led to the advancement of psychological theory in the field of why behavior. In the process of decision-making, people's minds are generally involved in the strains of the unconscious, which systematically leads them away from normative rationality.

Vidya et al. (2023) investigated the effect of digitalization on the cognitive biases of financial planners. The findings show that there are cognitive biases among financial planners while providing services to people in

need, which is a big challenge for them. The findings suggest that digital transformation using artificial intelligence technologies may help overcome these existing biases, although artificial intelligence technologies should be combined with human intelligence. To their knowledge, there is no research on the relationship between cognitive bias and artificial intelligence among financial planners.
Miwa and Majlouf (2022) investigated cognitive biases and stock returns in a research. The results have shown that stocks with higher forecast growth experience more negative forecast revisions and subsequent lower stock returns, especially after the period of high investor sentiment, which leads to changes in stock returns.

III. research method

The selected method according to the research topic is descriptive-survey method. In terms of its purpose, this study is part of applied research and its variables have been quantified; Due to the fact that the study of the effect of digitalization on the cognitive biases of financial planners is a correlational research; Also, statistical tests and structural equation method have been used to confirm or reject the hypotheses.

IV. Population and statistical sample

The statistical population includes companies in the south of Iran and was selected by a cross-sectional method in the second half of 1402 and a statistical sample was also selected by stratified random method, which includes financial managers, financial planners, and financial experts, and their number has reached 210 people. The statistical sample can be classified as follows:

Table 1- Determining the sample size by stratification

Statistical sample people	Abundance	Determining the sample size
Financial managers	100	9
Financial planners	1910	174
Financial experts	290	27
Total	2300	210

V. Research findings

The characteristics of gender, age, and education of the available statistical sample were investigated.

Table 2- frequency distribution of the statistical sample

gender	Abundance	Percent	Age range	Abundance	Percent	Level of Education	Abundance	Percent
gentlemen	192	92.43	20 to 30 years	32	15.20	Associate degree	28	13.33
ladies	18	10.58	30 to 40 years	83	39.50	Masters	85	40.47
			40 to 50 years	71	33.81	Masters senior	79	37.63
			Above 50	24	11.40	P.H.D	18	8.57
Total	210	100	Total	210	100	Total	210	100

VI. Variables analysis process

According to the questionnaire that used the Likert spectrum, the number 1 indicates the weak limit, the number 3 indicates the middle limit, and the number 5 indicates the high limit in the Likert spectrum, which is shown in the table below.

Table 3- Analysis of variables in the model

Variables	Min	Max	Average	standard deviation
Cognitive biases of financial planners	3.00	5.00	4.28	0.30
Artificial intelligence technology and its combination	3.00	4.90	4.30	0.32
Digital transformation combines artificial intelligence and humans	3.00	4.95	4.29	0.28

As it is known, the highest average is related to artificial intelligence technology and its combination with 4.30 and the lowest average is related to cognitive biases of financial planners with 4.28.

VII. Kolmogorov-Smirnov normality test and Cronbach's alpha coefficient

Table 4- The results of Kolmogorov-Smirnov normality test

objects	The obtained coefficient	meaningful	Result
Cognitive biases of financial planners	0.113	0.33	Confirming the normality of the statistical distribution
Artificial intelligence technology and its combination	0.114	0.34	Confirming the normality of the statistical distribution
Digital transformation combines artificial and human intelligence	0.115	0.32	Confirming the normality of the statistical distribution

According to the obtained result, the normality of the distribution of all items is confirmed.

Table 5- Definition of indicators in the software

Indicator	Definition in the model
The main indicator	Artificial intelligence technology and its combination
The main indicator	Digitization of the combination of artificial intelligence and human
The main indicator	Cognitive biases of financial planners
Expert system branch	C1
Robotics branch	C2
Machine learning branch	C3
Neural network branch	C4
Branch of natural language processing	C5
Computer skill branch	C6
Expert system and human intelligence	C7
Robotics and human intelligence	C8
Machine learning and human talent	C9
Neural network and human intelligence	C10
Natural language processing and human formulation	C11
Computer skills and human skills	C12
Defects in perception	C13
Error in judgment	C14
Defects in cognitive activities caused by not seeing	C15
Failure to neglect factors in favor of other factors	C16
Defects in decision making and judgment	C17
Defects in results and performance	C18

VIII. How to test and evaluation methods of reflective measurement models

With the help of PLS software, the factor loadings of the model were measured and for the variables of artificial intelligence technology, the digital transformation of the combination of artificial and human intelligence, and the cognitive biases of financial planners were determined. The figure below shows the research model in standard mode using the t-value test. Also, the results of hypothesis testing based on the estimation of standard coefficients are reflected in the graph.

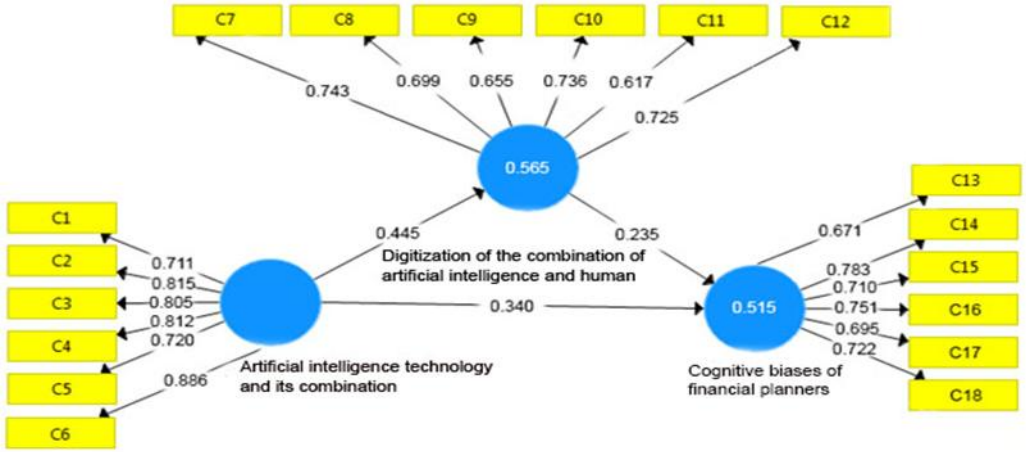

Figure 1- Research model in PLS software based on estimation of standard coefficients

In this study, artificial intelligence technology is an exogenous variable, cognitive biases of financial planners are an endogenous variable, and digital transformation is a combination of both endogenous and exogenous artificial and human intelligence. In the diagram below, the significance coefficients of the hypotheses are determined and verified using the t-test for all factor loadings at the 95% level, and the significance of their constructs is shown. For the significance of these coefficients, if the factor load is between -1.96 and +1.96, it is not significant.

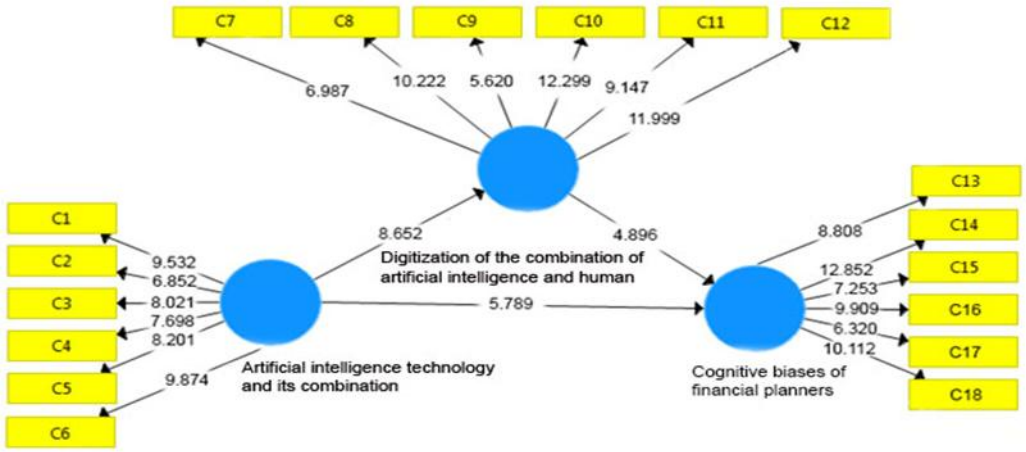

Figure 2- Research model in PLS software based on significance coefficients of hypotheses

The above diagram shows the structural equation model of the research in the significance state of the coefficients (t-value). This model actually tests all measurement equations (factor loadings) and structural equations using t-statistics. According to this model, all path coefficients and factor loadings are significant at the 95% confidence level in the standard mode. If the value of the t statistic is outside the range of -1.96 to +1.96, the model is significant, indicating that all factor loadings are significant at the 95% confidence level. The calculated values of t for each of the factor loadings of each indicator with its construct or hidden variable are above 1.96. Therefore, the alignment of questionnaire questions to measure concepts can be shown valid at this stage. In fact, the results of the above table show that what the researcher intended to measure through the questionnaire questions has been achieved by this tool.

IX. Reliability and validity of measurement model and related tests

Table 6- Results of different tests

Variables*	Alpha coefficient of internal consistency reliability
Artificial intelligence technology	0.8883
Cognitive biases of financial planners	0.8583
Digital transformation combines artificial and human intelligence	0.8289

Variables**	Composite reliability coefficients
Artificial intelligence technology	0.8013
Cognitive biases of financial planners	0.8125
Digital transformation combines artificial and human intelligence	0.7943
Variables***	Average variance extracted AVE
Artificial intelligence technology	0.6215
Cognitive biases of financial planners	0.6025
Digital transformation combines artificial and human intelligence	0.6145
Variables****	Convergent validity of root AVE
Artificial intelligence technology	0.7552
Cognitive biases of financial planners	0.7228
Digital transformation combines artificial and human intelligence	0.8153

* As can be seen, Cronbach's alpha coefficient for all variables is above 0.70; So it is concluded that the model has good internal consistency reliability.
** According to the obtained results, it was found that the variables have good composite reliability.
*** a) Convergent validity check: Convergent validity has been used for this purpose, which is indicated by AVE, the minimum convergent validity is 0.50, which is known as sufficient convergent validity, and if it is more than this number, it indicates Convergent validity is desirable.
**** b) Divergent validity: for this purpose, first the average value of the extracted variance is measured and then its square root is obtained to replace it on the diameter of the correlation matrix. In this method, the obtained number should be greater than its correlation, which is shown in the table below.
In the table above, according to the obtained results, it shows that the model has good divergent validity.

Table 7- The results of comparing the square root of AVE of a variable with its correlation with other variables

Variables	Artificial intelligence technology	Digital transformation combines artificial and human intelligence	Cognitive biases of financial planners
Artificial intelligence technology	0.7552		
Digital transformation combines artificial and human intelligence	0.6398	0.7228	
Cognitive biases of financial planners	0.4545	0.5412	0.8254

X. The evaluation method of formative measurement models

The determination coefficient R2 is used as one of the ways to evaluate the shaper model. The coefficient of determination R2 for the variables is specified in the diagram below.

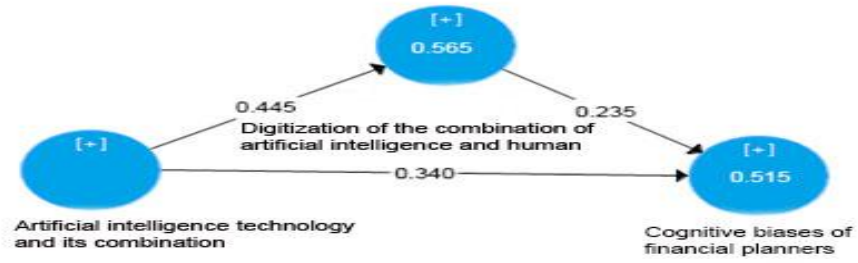

Figure 3- Evaluation of shaper measurement models

It can be mentioned that artificial intelligence technology has been able to explain 0.545 of the variance of the variable of digital transformation, the combination of artificial and human intelligence. Artificial

intelligence technology and digital transformation, the combination of artificial and human intelligence have been able to explain the variance of cognitive biases of financial planners with a coefficient of 0.505; The researchers have introduced three values of 0.19, 0.33 and 0.67 as criteria values for weak, medium and strong values of R2. Nevertheless, it can be concluded that the model has a high predictive ability and the residual value is related to the prediction error and can include other influencing factors on the digital transformation, the combination of artificial and human intelligence and the cognitive biases of financial planners.

XI. The results of the general fit of the model with the GOF criterion

As can be seen

GOF= $\sqrt{0.782 * 0.565} = 0.6646$

The results of GOF criterion value is equal to 0.6646, which shows the strong fit of the overall research model. Therefore, it can be concluded that the presented model has a good fit and the collected data have been able to cover the designed model well.

XII. Answer to the research hypotheses based on the partial least power method (PLS)

According to the results obtained from β coefficient (-0.330) and t-statistics (-4.896) and (-8.652), it was found that artificial intelligence technology and digital transformation of the combination of artificial and human intelligence reduce the cognitive biases of financial planners. It has a significant effect and confirms the main hypothesis.

According to the results obtained from β coefficient (-0.445) and t-statistic (-8.652), it was found that artificial intelligence technology has a significant effect on reducing the cognitive biases of financial planners and confirms the main hypothesis.

According to the results obtained from β coefficient (-0.340) and t-statistic (-5.789), it was found that the combination of artificial and human intelligence has a significant effect on reducing the cognitive biases of financial planners and confirms the main hypothesis.

According to the results obtained from β coefficient (-0.235) and t-statistic (-4.896), it was found that digital transformation and service provision has a significant effect on reducing the cognitive biases of financial planners and confirms the main hypothesis.

XIII. Discussion

It can be said that the effectiveness of digital transformation on reducing the cognitive biases of financial planners in companies in the south of Iran was confirmed. Based on statistical analysis, it was determined that digital transformation according to its three indicators such as artificial intelligence technologies, the combination of artificial and human intelligence technology, digital transformation in terms of service delivery can have a positive effect on reducing the cognitive bias of financial planners; Therefore, digital transformation and the use of electronic devices or services, in addition to reducing mistakes and errors that may occur by human power, leads to greater ease and accuracy for users and customers. In this regard, the decisions made by managers and planners or financial experts are more accurate and easier because the digital transformation process in today's world can play a significant role in the growing activities of the company.

The results of the main hypothesis of the research indicate that digital transformation has a significant effect on the cognitive biases of financial planners in companies in southern Iran; Therefore, digital transformation can lead to the reduction of cognitive biases of financial planners; In other words, the process of digital transformation and the use of digital technologies in the company reduces the cognitive and behavioral bias of financial planners because when electronic programs or artificial intelligence are used with the combination of human intelligence, the possibility of mistakes is less and according to the set programs or tests They go forward and lead to the improvement of the company's activities and finally to its performance. These results with research Vidya and etal (2023), miva and majlouf(2022), Yadollahi and Selukian(2022), It is aligned and compatible.

The results of the first sub-hypothesis of the research indicate that artificial intelligence technology has a significant effect on the cognitive biases of financial planners in companies in southern Iran; Therefore, artificial intelligence technology can play a positive role in reducing the cognitive bias of financial planners and ultimately lead to the improvement of company activities and performance. In other words, the more artificial intelligence technology is in the company, the less the possibility of mistakes or mistakes by people, and as a result, it continues to operate according to correct planning and leads to better performance. These results with research Vidya and etal(2023), Panayet and etal(2022), Dadashi and etal(2022), It is aligned and compatible.

The results of the second sub-hypothesis of the research indicate that the combination of artificial and human intelligence has a significant effect on the cognitive biases of financial planners in companies in southern Iran; Therefore, the combination of artificial and human intelligence can play a positive role in reducing the cognitive

and behavioral bias of financial planners and make them continue their activities with more confidence, which ultimately leads to the improvement of the company's performance; In other words, the effect of the combination of artificial and human intelligence on cognitive bias makes it possible to perform better in the company's activities with electronic programs and artificial intelligence by controlling the manpower and careful planning. These results with research Vidya and etal(2023), bent and etal(2021), Rouh Parvar and Ebrahimi(2021), It is aligned and compatible.

The results of the third sub-hypothesis of the research indicate that digital transformation and service provision have a significant effect on the cognitive biases of financial planners in companies in the south of Iran; Therefore, digital transformation can play a positive role in reducing cognitive bias by providing services by planners; In other words, cognitive bias is affected by digital transformation and leads to financial planners being able to do more convenient and accurate work in terms of providing services and ultimately leading to the improvement of all company activities and performance, which can play a better role in gaining profitability. The company also has, because the company's affairs and services are handled with more tact and accuracy. These results with research Vidya and etal(2023), Martinez and etal(2020), Shirazi and etal(2020), It is aligned and compatible.

XIV. Practical suggestions and cases for future researchers

According to the results of the main hypothesis, it can be suggested that companies in the south of Iran and other similar companies pay attention to the digital transformation process in order to reduce the cognitive bias of financial planners; Today, most companies in the world are looking for progress and the process of digital transformation, and financial planners are also trying to adapt their activities accordingly. Therefore, for this purpose, it can be suggested to use companies similar to other companies for the application of the digital transformation process or to use the experiences and skills of people who are proficient in this field so that they can implement their digital transformation process with the goals and Adapt the upcoming activities and test any new program that is at the top of the work so that its error rate is minimized.

According to the results of the first sub-hypothesis, it can be suggested to reduce the cognitive bias of financial planners to pay attention to artificial intelligence technology; Because today the phenomenon of artificial intelligence has been able to open a special place in companies. Therefore, training classes should be held for financial planners to learn different and new artificial intelligence courses so that they can complete their path according to the progress and methodology of the world. In this regard, it is possible to design strategies to improve the performance of the model so that other relevant people such as managers, employees, customers and stakeholders of the company can easily use it.

According to the results of the second sub-hypothesis, it can be suggested to reduce the cognitive bias of financial planners to pay attention to the combination of artificial and human intelligence; Because the combination of these two components can reduce possible errors. In this regard, financial planners can be given the opportunity to carefully examine the digital processes related to artificial intelligence used in other activities so that they can minimize the error in it or try to improve its situation. The process is also accompanied by modern and developed training adapted to global progress.

According to the results of the third sub-hypothesis, it can be suggested to reduce the cognitive bias of financial planners to pay attention to the digital transformation in the field of providing services; Financial planners try to perform their activities well in order to provide services to managers and stakeholders; Therefore, they should be suggested to be aware of global information and programs in the field of global digitization or to update their information so that they can provide appropriate programs with minimal errors and promote its progress.

According to the results of the research, it can be suggested for future researchers: In this study, the impact of digital transformation on the cognitive biases of financial planners has been investigated; It is expected that the following components will be examined in the future research:

- Regarding risk management and information asymmetry; Financial ability of managers and competition between them
- Regarding the disclosure of financial and non-financial information and the quality of financial reporting
- Due to disclosure of social responsibility, concentration of ownership and its structure, financial development
- With regard to growth opportunities, capital structure, management system mechanisms; Cost of Capital

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