

**Research Article**

**AI-Driven Digital Transformation in Banking: The Mediating Role of Motivation in the Relationship Between Individual Business and Organizational Performance**

*Bankacılıkta Yapay Zekâ Odaklı Dijital Dönüşüm: Bireysel İş ve Örgütsel Performans Arasındaki İlişkide Motivasyonun Aracılık Rolü*

<b>Haldun TURAN</b> Dr. Öğr. Üyesi, İstanbul Rumeli Üniversitesi Mühendislik ve Doğa Bilimleri Fakültesi <a href="mailto:haldun.turan@rumeli.edu.tr">haldun.turan@rumeli.edu.tr</a> <a href="https://orcid.org/0000-0002-0701-7679">https://orcid.org/0000-0002-0701-7679</a>	<b>Kenan AYDIN</b> Prof. Dr. İstanbul Gelişim Üniversitesi İktisadi, İdari ve Sosyal Bilimler Fakültesi <a href="mailto:keaydin@gelisim.edu.tr">keaydin@gelisim.edu.tr</a> <a href="https://orcid.org/0000-0002-0496-5665">https://orcid.org/0000-0002-0496-5665</a>
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**Abstract**

*The effect of technological applications on the performance of digital transformation processes of enterprises and the psychological and organizational mechanisms through which this effect is realized have not been adequately explained. This study examines the effect of employees' Artificial Intelligence-oriented Digital Transformation Perceptions (AIDA) on Individual Job Performance (BIP) and Organizational Performance (PP) and the mediating role of motivation in this relationship. This study aims to provide a human-centered perspective by analyzing whether the impact of AI-driven digital transformation perception on employees' performance outcomes is direct or through employee motivation. The sample of this quantitative study consists of blue and white-collar employees working in banking institutions in Istanbul. Data were collected from 284 participants through a structured 26-item questionnaire. The data obtained were analyzed by Structural Equation Modeling (PLS-SEM) approach with Partial Smallest Method using SmartPLS 4 software. In the evaluation of the measurement model, Cronbach's Alpha, composite reliability (CR) and mean explained variance (AVE) values were taken into account. For the structural model, path coefficients, t- and p-values from bootstrapping, as well as SRMR, NFI, and GoF indices, were assessed. The results show that EPADT has a significant positive effect on both IBP and OP, and that employee motivation mediates the relationship between IBP and OP. These findings highlight the importance of employee motivation in successful digital transformation.*

**Keywords:** Artificial Intelligence-Focused Digital Transformation Perception, Individual and Organizational Performance, Motivation

**JEL Classification:** M15, G21, M12, O33

**Öz**

*İşletmelerin dijital dönüşüm süreçlerinde teknolojik uygulamaların performans üzerindeki etkisi, bu etkinin hangi psikolojik ve örgütsel mekanizmalar aracılığıyla gerçekleştiği yeterince açıklanamamıştır. Bu çalışma, çalışanların Yapay Zekâ odaklı Dijital Dönüşüm Algularının (YZDDA) Bireysel İş Performansı (BİP) ve Örgütsel Performans (ÖP) üzerindeki etkisini ve bu ilişkide motivasyonun aracılık rolünü incelemektedir. Bu çalışma, yapay zekâ odaklı dijital dönüşüm algısının çalışanların performans çıktıları üzerindeki etkisinin doğrudan mı yoksa*

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*çalışan motivasyonu aracılığıyla mı ortaya çıktığını analiz ederek, insan odaklı bir perspektif sunmayı amaçlamaktadır. Nicel araştırma türündeki bu çalışmanın örneklemini, İstanbul'daki bankacılık kurumlarında çalışan mavi ve beyaz yakalı çalışanlardan oluşmaktadır. Veriler, yapılandırılmış 26 maddelik anket aracılığıyla 284 katılımcıdan toplanmıştır. Elde edilen veriler, SmartPLS 4 yazılımı kullanılarak Kısmi En Küçükler Yöntemiyle Yapısal Eşitlik Modellemesi (PLS-SEM) yaklaşımıyla analiz edilmiştir. Ölçüm modelinin değerlendirilmesinde Cronbach's Alpha, bileşik güvenilirlik (CR) ve ortalama açıklanan varyans (AVE) değerleri dikkate alınmıştır. Yapısal modelin değerlendirilmesinde yol katsayıları, bootstrap yöntemiyle elde edilen t ve p değerleri ile SRMR, NFI ve GoF uyum iyiliği indeksleri esas alınmıştır. Analiz sonuçları, YZDDA'nın hem BİP hem de ÖP üzerinde anlamlı ve pozitif bir etkisi olduğunu ve çalışanların motivasyonunun BİP ve ÖP arasındaki ilişkide aracılık rolü olduğunu ortaya koymaktadır. Sonuçlar, çalışan motivasyonunun dijital dönüşüm süreçlerinin başarısı için kritik bir mekanizma olduğunu göstermektedir.*

**Anahtar Kelimeler:** *Yapay Zekâ odaklı Dijital Dönüşüm Algısı, Bireysel ve Örgütsel Performans, Motivasyon*

**JEL Sınıflandırması:** *M15, G21, M12, O33*

## 1. Introduction

Digital transformation is gaining momentum in modern businesses and has become a key strategic priority for companies seeking to enhance employee performance and increase profit margins. It is observed that research and development studies for the digital transformation of businesses are rapidly taking their place in many organizations. For this reason, all concepts related to transformation, the factors it affects, and the extent to which the sociodemographic and sociocultural variables in the background are affected make it an important research topic to reveal how the sociological structures of the internal stakeholders in the organizational structure are affected in the rapidly transforming and digitalizing world. A digitalization-based transformation within the framework of sustainability in businesses can be achieved by reviewing all business processes and relations with all stakeholders. It is imperative to determine the perspectives of employees, who are the internal stakeholders of the organizational structure, on digital transformation in order to be active in all processes within the organizational structure. Thus, sustainable competitive advantage can be supported by increasing employee motivation and performance by identifying and completing deficiencies and requirements.

In today's financial industry, rapid AI advancements continue to drive innovation in banking, particularly in boosting operational efficiency. Naturally, the relationship between technology and individuals significantly influences the digital transformation process. Furthermore, adopting and adapting to digital advancements at the organizational and individual levels must occur at the layer of every organization. Therefore, studying the effect of digitalization on both organizations and their employees is vital to effectively manage the changes necessary to ensure business sustainability and enhance their market position (Verhoef et al., 2021). Thanks to digital transformation, physical dependency is eliminated, especially for those working in the office environment, and cloud-based working environments provide the opportunity to work more actively with all units within the organizational structure. Therefore, digital applications are essential and effective management tools (Cöster, 2016). Companies carry out their digital transformation using different digital applications, and thus access to information accelerates and becomes an important management tool. In parallel with these digital developments, businesses have tended to research business descriptions, ways of doing business and results in the digital age with the emergence of human and relationship-oriented roles (Makridakis, 2017).

Within the framework of digitalization, the relationship between employees' perspectives on digital transformation and organizational performance is evaluated from many perspectives (Brito & Oliveira, 2016; Gurbuz & Mert, 2011). Employee motivation and the business's adoption of AI-driven digital transformation are crucial in enhancing organizational performance. Improving individual performance and developing organizational culture play an important role in the relationship between innovation realized with AI-driven digital transformation in organizational structures and strategic human resources management approach (Do et al., 2025). Talented employees who know how to use technology and are prone to AI-driven digital transformation are the most important values for businesses, and the more efficiently, effectively, and accurately organizations use these values, the easier it will be for them to succeed. With the development of the business model approach, which includes talented and qualified employees who are prone to artificial intelligence and digital transformation, and who know how to use

technology, research evaluating the relationship between business performance has increased (Najam Shaikh et al., 2025).

Despite the growing body of research on digital transformation and organizational performance, limited attention has been paid to the psychological mechanisms through which AI-driven transformation influences performance outcomes. In particular, the mediating role of employee motivation in translating digital transformation perceptions into both individual and organizational performance remains underexplored. This study integrates digital transformation with motivation theory in the specific context of the banking sector and offers a human-oriented evaluation. In this context, the research contributes to the literature by identifying the indirect performance paths of AI-powered digital transformation and emphasizing the strategic role of employee motivation in sustainable organizational processes.

Considering the above arguments, the main purpose of the study is to reveal employees' perspectives on AI-driven digital transformation in their companies, to investigate the relationship between employees' perception of AI-driven digitalization and individual and organizational performance, and to examine the possible mediating role of motivation in this relationship. This study aims to create a model that connects employees' perceptions of AI-driven digitalization, motivation, individual business performance, and organizational performance. It will also explore how motivation can mediate this relationship while evaluating the theoretical framework and background for testing and evaluating the model.

In the second part of this study, theoretical framework and research hypotheses; in the third part, the model and methodology of the research, its design, sample characteristics and analytical procedures used; In the fourth chapter, empirical findings are presented. The last section includes discussion and conclusion sections.

## **2. Theoretical Framework**

### **2.1. The Effect of EPADT on Employee Motivation**

In their research, Russel and Norvig (2015) found that employees resisted digital transformation in the first place, but their perceptions changed over time and this change increased intrinsic and extrinsic motivation. So much so that automating routine tasks with artificial intelligence-supported digital transformation increases employee satisfaction and motivation. In this context, providing training resources for digital transformation practices can support skill development while also improving organizational performance. In some studies on the subject, it has been determined that digital transformation increases efficiency, improves better decision-making processes, and increases performance by encouraging innovation (Braganza et al., 2021; Malik et al., 2022).

*H1: EPADT will positively affect employee motivation.*

### **2.2. The Effect of EPADT on IBP and OP**

Thanks to the integration of artificial intelligence into business systems, companies are rapidly advancing technologically and expanding their operational capabilities. AI applications are increasingly prevalent across diverse sectors—including agriculture, healthcare, finance, education, as well as areas such as automation, energy, and communication—drawing significant interest (Guibao et al., 2018; Sarker, 2022; Szczepaniuk & Szczepaniuk, 2022). As previously mentioned, artificial intelligence has the potential to enhance organizational performance (OP) by increasing profitability, expanding market share, improving customer satisfaction, fostering innovation, and boosting efficiency. According to Chen et al. (2022), AI's ability to analyze extensive datasets quickly and accurately supports superior decision-making at all organizational levels, enabling employees to concentrate on more creative and strategic endeavors. The integration of AI systems advances competitiveness, benefiting various functions ranging from resource management to customer service. These systems improve organizational efficiency and strengthen decision-making processes, yielding more innovative and effective outcomes (Braganza et al., 2021). Additionally, reduced workloads can enhance employee engagement, allowing staff to dedicate more meaningful time to strategic initiatives, thereby increasing individual performance and contributing to overall organizational growth.

*H2: EPADT will positively affect individual business performance (IBP).*

*H3: EPADT will positively affect organizational performance (OP).*

**2.3. The Effect of Employee Motivation on IBP and OP**

Employee individual business performance and organizational commitment are considered sensitive issues at the beginning of organizational technological change driven by digitalization. While there is considerable evidence supporting the positive or negative effects of new technologies on employees (Majchrzak, 1987; Shaiken, 1984; Whitelaw et al., 2020), it is clear that the features of any new technology alone do not determine employee acceptance or rejection (Manufacturing Studies Board, 1986). Employees' beliefs about the effect of technology and how technological change is managed are seen as significant factors in their decisions to actively cooperate with or resist technological change (Levi et al., 1992; Ting et al., 2020). Factors such as the increasing application of digitalization in business operations, stress in adapting to the new situation, and the risk of job loss due to technological change are likely to contribute to workforce resistance to technological change. The adoption of new technologies can affect employee motivation and performance both positively and negatively (Majchrzak, 1987), with these effects being personal or work-related. Performance is the measurement of the level of achievement of a defined goal within an individual or organizational structure (Lingmont & Alexiou, 2020). In other words, performance is defined as the extent to which an individual, group, or organization achieves a work-related goal. In businesses engaged in organizational activities, high individual performance of members or employees is crucial for achieving defined goals and succeeding in competitive environments. Therefore, senior managers should prioritize employee motivation throughout these changes.

*H4: Employee motivation will positively affect individual business performance (IBP).*

*H5: Employee motivation will positively affect organizational performance (OP).*

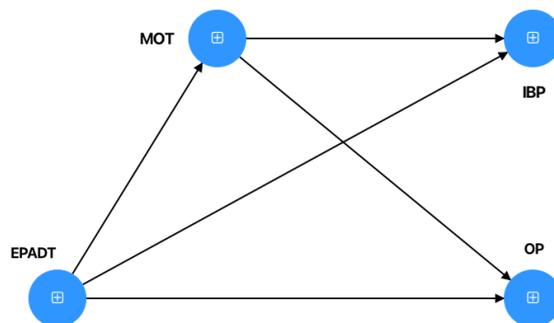
*H6: Employee motivation will mediate the relationship between EPADT and individual business performance (IBP).*

*H7: Employee motivation will mediate the relationship between EPADT and organizational performance (OP).*

**3. Research Model and Methodology**

Figure 1 illustrates the presumed relationships defined by the research model. This proposed model examines the relationships among EPADT, IBP, and OP, and the mediating role of motivation in these relationships.

**Figure 1. Conceptual Research Model**



*Employees' Perception of AI-driven Digital Transformation (EPADT), Motivation (MOT), Individual Business Performance (IBP), and Organizational Performance (OP) were included in the structural model.*

**Source:** Prepared by the author

The proposed research sought to determine the opinions of people in various branches through the use of a questionnaire that was created within the framework of quantitative research. Participants were contacted with convenience sampling to answer the questionnaire. A PLS-SEM analysis was utilized to assess the proposed research model and hypotheses. PLS-SEM has the advantage of being robust and able to analyze complex models with non-normal distributions. A measurement model was first examined for its reliability and validity, followed by a structural analysis of relationships between latent constructs using SmartPLS 4.

### 3.1. Target Population and Sample

The universe of this research is all employees who are actively involved in organizational life. In this context, all employees and organizations that comprise the human resources of the organization, regardless of whether they are blue-collar or white-collar, represent the universe of this research. Because "organizational and individual success" is a situation that concerns all organizations. "Motivation" and "Digital transformation" are concepts that apply to all kinds of employees in the organization. For this reason, the universe of such research encompasses all organizations and their employees. Due to the large size of the research population, the "convenience sampling" method was employed in this study, as it met the "accessibility" criterion (Gentles et al., 2016). The sample used for this research consists of Akbank branches operating in Istanbul, with 12 different branches included. Between November 2025 and December 2025, the data collection process was conducted with 284 of the 295 staff members working in these branches, who agreed to participate in the survey through routine visits over three months. At the meeting of the Istanbul Rumeli University Ethics Committee Presidency dated 26/11/2025 and numbered 050.04-62191, a letter was provided stating that there was no ethical objection.

### 3.2. Data Collection Tool

A questionnaire consisting of 26 items was administered to participants to examine the relationships among the variables in the conceptual model and to test the proposed hypotheses. Four questions (gender, age, education, and organizational position) were asked to determine the participants' sociodemographic and professional characteristics. To measure the research variables, a five-point Likert scale ranging from "(1) Strongly Disagree" to "(5) Strongly Agree" was used. The Digital Transformation Scale, developed by Nadeem and colleagues (2018), was tailored to the literature and was used to measure participants' perceptions of AI-driven digital transformation. The Turkish Digital Transformation Scale validated by Sağlam (2021) was taken into account (Kassa & Worku, 2025; Nadeem et al., 2018; Sağlam, 2021).

Individual Business Performance (IBP). The Individual Job Performance Questionnaire was developed based on literature research (Chen et al., 2022; Do et al., 2025; Kassa & Worku, 2025). It has been adapted in accordance with performance measurement studies conducted in the context of Turkey (Çalışkan & Koroğlu, 2022). Scale items reflect employees' perceptions of achieving performance goals, their success in achieving these goals, and their contributions to organizational goals. Higher scores indicate higher levels of perceived individual performance.

The Organizational Performance Questionnaire was conducted based on literature research (Chen et al., 2022; Venkatraman & Ramanujam, 1986; Sayılğan, 2017) adapted the measurement elements showing the positive impact of artificial intelligence-supported digitalization on firm competitiveness and organizational performance. The measurement elements were designed using subjective indicators that reflect financial and market outcomes, such as customer growth, profitability, customer satisfaction, and achieving budget targets. High scores or average values on the scale indicate the high-performance level of the organization.

The Intrinsic Motivation Scale was developed by Deci and Ryan (2000). The short version of the scale is one-dimensional and consists of six elements. The total score ranges from 6 to 30 and there are no reverse-coded items. In the original study, Cronbach's alpha reliability coefficient was determined to be 0.94 (Ryan & Deci, 2000). Scale, Bardak and Mamatoğlu (2023), have been adapted and verified in Turkish, and their reliability and construct validity have been proven in the Turkish context.

**Table 1. Variables**

Variable	Source
<b>Perception of AI-driven digital transformation (EPADT)</b>	
1. The organization has access to internal and external talent with the right technical skills to support AI efforts.	(Nadeem et al., 2018)
2. Our data scientists are very skilled in using AI technologies (e.g., ML, NLP, deep learning).	(Kassa & Worku, 2025)
3. Our data scientists have the right skills to perform their jobs successfully.	(Sağlam, 2021)
4. Our data scientists are instrumental in data analysis, processing, and security	
5. Our data scientists are given the necessary training to deal with artificial intelligence applications	
6. Our data scientists have the appropriate work experience to perform their jobs.	
<b>Motivation (MOT)</b>	
1. I enjoy discovering things.	(Ryan & Deci, 2000)
2. I enjoy researching interesting topics.	
3. I'm happy to learn new things.	(Bardak & Mamatoğlu, 2023)
4. I think professional development is important for success in business life.	
5. When I do something, I try to do my best.	
6. When I'm doing things, I like to push my limits.	
<b>Individual business performance (IBP)</b>	
1. With AI integration, I am confident that I will achieve my own performance targets.	(Chen et al., 2022; Do et al., 2025)
2. With AI integration, my individual performance level over the past year has been excellent.	(Kassa & Worku, 2025)
3. With AI integration, I achieve my goals on a regular basis.	(Çalışkan & Köroğlu, 2022)
4. With AI integration, my individual goals directly support the goal of the organization.	
5. With AI integration, my individual performance has increased significantly over the past year.	
<b>Organizational performance (OP)</b>	
1. With AI integration, the number of customers has increased.	(Chen et al., 2022;
2. With AI integration, profits have increased.	Venkatraman & Ramanujam, 1986)
3. AI-driven digitalization has contributed to increasing customer satisfaction.	(Sayılğan, 2017)
4. AI-driven digitalization has contributed to increasing the number of customers.	
5. AI-driven digitalization has contributed to the achievement of budget targets.	

**4. Findings**

Before analyzing the gathered data, it is crucial to identify the type of audience from which this data was sourced. Table 2 presents the demographic overview of the participant group that contributed data for this study.

**Table 2. Demographic characteristics of the sample**

Variable	Levels	n	%
Gender	Male	227	79.9
	Female	57	20.1
Age	25-29	64	22.5
	30-39	116	40.8
	40-49	61	21.5

	50-59	40	14.1
	60 and above	3	1.1
Experience	1-2 years	40	14.1
	3-6 years	73	25.7
	7-9 years	65	22.9
	10-14 years	74	26.1
	15 and above	32	11.3
Academic Qualification?	Undergraduate	229	80.6
	Graduate	40	14.1
	PhD	15	5.3

**Source:** Authors' calculation.

As shown in Table 2, it is evident that the gender distribution in the sample, which is the data source of this study, is not evenly balanced. The sample predominantly consists of male participants. It is also observed that the sample includes mostly young individuals, with 40.8% falling within the 30 to 39 age group.

#### 4.1. Evaluation of the Measurement Model

Factor analyses were performed to assess the Measurement Model. For this purpose, the PLS Algorithm was run using Smart PLS version 4.0. The main criteria and test findings for the model factor analysis are provided in Table 2. Accordingly, the main criteria for the model factor analysis include factor loadings, factor reliability, Cronbach's Alpha coefficient, average variance extracted (AVE), rho\_A coefficient, composite reliability (CR) coefficient, R2 value, T-statistic, and variance inflation factor (VIF) values (Senaviratna & Cooray, 2019). It is recommended that factor loadings be at least 0.700 and indicator reliability be at least 0.400 (Sarstedt et al., 2021). As a result of the analysis, Cronbach's Alpha ranged from 0.866 to 0.945, rho\_A from 0.881 to 0.915, CR from 0.903 to 0.958, and AVE from 0.653 to 0.820, all surpassing the suggested threshold values. In conclusion, the model shows satisfactory internal consistency, data coherence, reliability, and convergent validity (see Table 3).

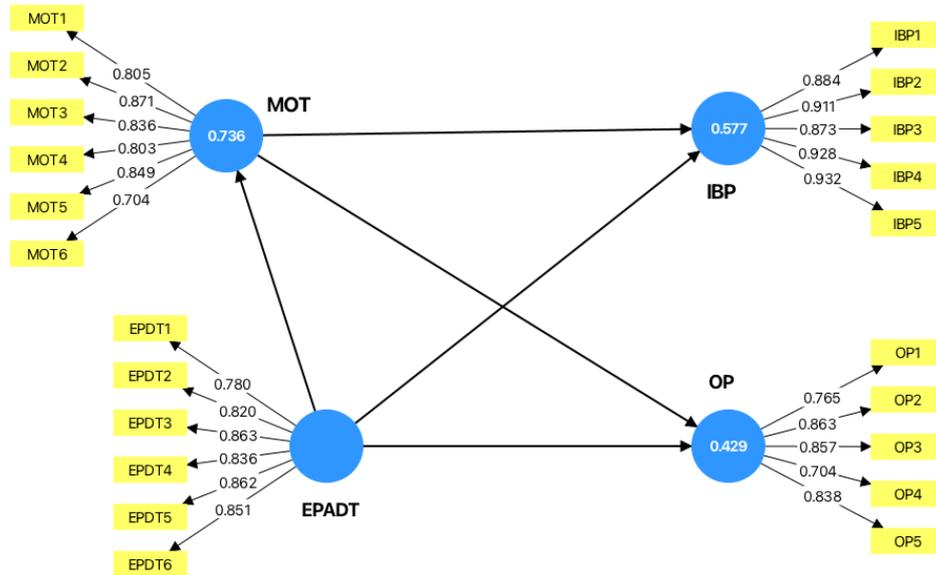
**Table 3. Measurement Model Factor Analysis**

Scale	Variable	Factor Loads	Cronbach's alpha	rho_A	CR	AVE	R <sup>2</sup>	T Value	VIF
EPADT	EPADT1	0.780	0.913	0.915	0.933	0.699		28.309	2.140
	EPADT2	0.820						30.621	2.376
	EPADT3	0.863						44.189	2.789
	EPADT4	0.836						31.569	2.514
	EPADT5	0.862						31.520	3.006
	EPADT6	0.851						45.324	2.643
MOT	MOT1	0.805	0.897	0.906	0.921	0.661	0.736	29.716	2.008
	MOT2	0.871						17.868	1.650
	MOT3	0.836						36.909	2.738
	MOT4	0.803						26.118	2.208
	MOT5	0.849						42.030	2.581
	MOT6	0.704						56.388	2.895
IBP	IBP1	0.884	0.945	0.949	0.958	0.820	0.577	68.449	3.818
	IBP2	0.911						32.198	2.920
	IBP3	0.873						91.572	4.448
	IBP4	0.928						69.236	4.877
	IBP5	0.932						44.069	3.307
OP	OP1	0.765	0.866	0.881	0.903	0.653	0.429	18.220	1.788
	OP2	0.863						39.378	2.323
	OP3	0.857						40.368	2.447
	OP4	0.704						15.879	1.512
	OP5	0.838						39.794	2.148

**Source:** Authors' calculation.

The identification of the multiple linear connection issue relies on the Variance Inflation Factor (VIF) values for the independent variables. To avoid multicollinearity, the VIF values for the observed variables should not exceed 10 (Küçükakçalı & Gözükara Bağ, 2022). The test results showed that the VIF values for the observed variables ranged from 1.512 to 4.877 (Table 3). Therefore, multicollinearity among the independent variables was not detected.

**Figure 2:** Measurement Model



**Source:** Prepared by the author

The statistical significance of all variables can be evaluated based on the t-test results. If the T-statistic values of the variables forming the model are greater than 1.96, it is concluded that these variables are statistically significant for the model (Çakır, 2020). As shown in Table 3, the T-statistic values range from 15.879 to 91.572, well above the threshold. Therefore, it has been concluded that all variables forming the model are statistically significant.

**Table 4. Findings of interdimensional correlations and dissociation validities.**

Correlations					Fornell-Larcker Criterion				HTMT Rates		
Scale	IBP	MOT	OP	EPDT	IBP	MOT	OP	EPDT	IBP	MOT	OP
<b>IBP</b>	1.000				0.906						
<b>MOT</b>	0.723	1.000			0.723	0.813			0.767		
<b>OP</b>	0.590	0.654	1.000		0.590	0.654	0.808		0.637	0.726	
<b>EPDT</b>	0.740	0.858	0.583	1.000	0.740	0.858	0.583	0.836	0.791	0.843	0.646

**Source:** Authors' calculation.

The discriminant validity between the constructs was tested using the Fornell and Larcker criterion and the Heterotrait-Monotrait (HTMT) ratio tests. According to Fornell and Larcker (1981), for adequate discriminant validity, the square root of the AVE of each construct should be greater than the correlations between that construct and the other constructs (Fornell & Larcker, 1981). The analysis shows that the HTMT ratios among the latent constructs range from 0.637 to 0.843 (see Table 4). Following Sarstedt et al.'s (2021) more conservative guideline, since all ratios are below 0.850, this indicates satisfactory discriminant validity as well (Sarstedt et al., 2021; Henseler et al., 2016).

#### 4.2. Evaluation of the Structural Model

The primary criteria for evaluating the structural model are SRMR and GoF goodness-of-fit indices, along with hypothesis tests. The model's fit level was examined using SRMR and GoF. Henseler and colleagues first proposed the SRMR index as a fit measure for Smart PLS, and it is recommended that SRMR values be below 0.10 to indicate good fit (Henseler et al., 2016). The GoF index, proposed by

Tenenhaus and colleagues as another fit measure, suggests that a GoF value above 0.36 indicates a strong model fit (Tenenhaus et al., 2005).

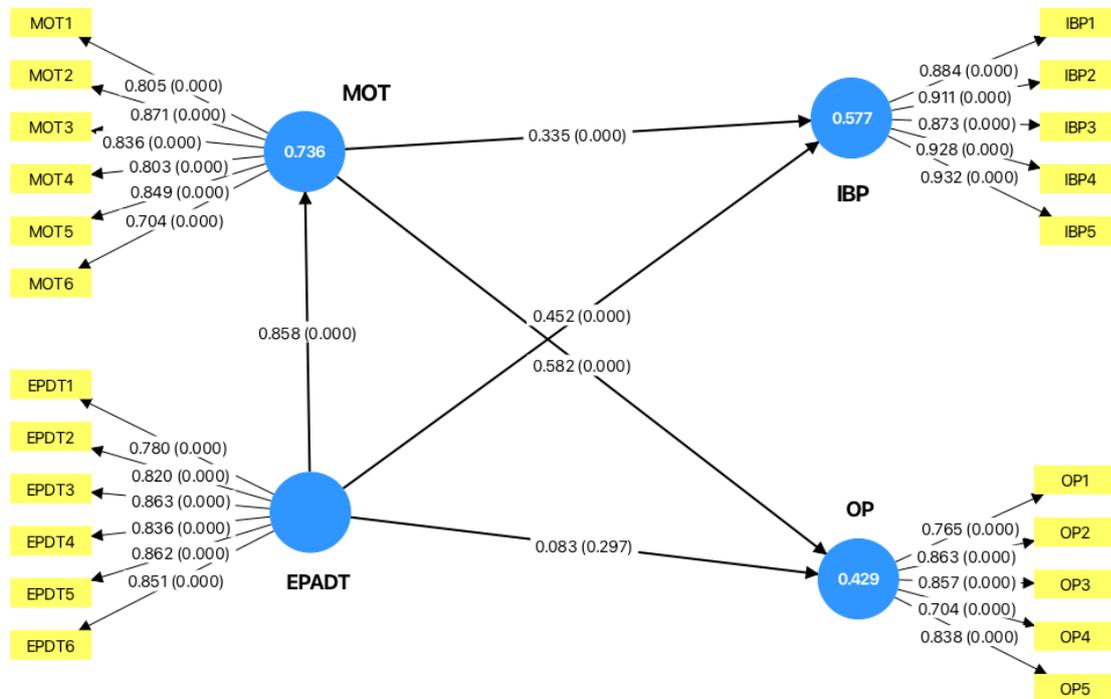
As a result of the analysis, SRMR was found to be 0.061 (Table 5). Additionally, the average R<sup>2</sup> of the model sizes was calculated as 0.580 and the average AVE as 0.708; using these values, GoF was determined to be 0.423 (Table 4). The obtained SRMR and GoF values indicate that the structural model fits well.

**Table 5. Fit indices findings.**

Scale	Criteria	Saturated model	Estimated model	Result
SRMR	< 1.000	0.061	0.066	Good fit
R <sup>2</sup> average		(0.736 + 0.577 + 0.429 / 3) = 0.580		Good fit
AVE average		(0.820 + 0.661 + 0.653 + 0.699) / 4 = 0.708		
GoF	> 360	0.414	0.423	

Source: Authors' calculation.

**Figure 3: Structural Model Results (PLS-SEM)**



Source: Prepared by the author

### 4.3. Hypothesis testing

The research hypotheses were tested by performing a bootstrapping procedure. In hypothesis testing, the path coefficient  $\beta$ , the T statistic, and the p-value are used to make a decision. Support for the hypotheses is indicated when the T statistic ( $\beta$ ) between the structures is greater than 1.960 at a 95% confidence level, and the p-value is less than 0.050 (Çakır, 2020). The direct and indirect effects tested within the scope of the structural model are presented in Table 6. The results indicate that EPADT has a significant and positive effect on IBP (H1 supported;  $\beta = 0.452$ ,  $t = 5.312$ ,  $p < .001$ ). Similarly, the EPADT also has a very strong and significant effect on motivation (H2 supported;  $\beta = 0.858$ ,  $t = 43.534$ ,  $p < .001$ ). Conversely, the direct effect of the EPADT on OP is not significant (H3 rejected;  $\beta = 0.083$ ,  $t = 1.043$ ,  $p > .05$ ). Analysis of motivation's effect on IBP (H4) and OP (H5) shows positive and statistically significant relationships ( $\beta = 0.335$ ,  $t = 4.344$ ,  $p < .001$ ;  $\beta = 0.582$ ,  $t = 7.522$ ,  $p < .001$ ).

**Table 6. Hypothesis test results**

	Path coefficient $\beta$	Standard deviation	T statistics	P values	Result
<b>Direct effects</b>					
H1: EPADT → IBP	0.452	0.085	5.312	0.000	<b>Supported</b>
H2: EPADT → MOT	0.858	0.020	43.534	0.000	<b>Supported</b>
H3: EPADT → OP	0.083	0.080	1.043	0.297	<b>Not supported</b>
H4: MOT → IBP	0.335	0.077	4.344	0.000	<b>Supported</b>
H5: MOT → OP	0.582	0.077	7.522	0.000	<b>Supported</b>
<b>Indirect effects</b>					
H6: EPADT → MOT → IBP	0.287	0.067	4.264	0.000	<b>Supported</b>
H7: EPADT → MOT → OP	0.500	0.069	7.255	0.000	<b>Supported</b>

**Source:** Authors' calculation.

EPADT has a significant effect on IBP both directly and indirectly through motivation (H6 supported;  $\beta = 0.287$ ,  $t = 4.264$ ,  $p < .001$ ). However, it was found that EPADT had no direct effect on OP ( $\beta = 0.083$ ,  $t = 1.043$ ,  $p > .05$ ). Nevertheless, an indirect effect on OP through motivation was determined (H7 supported;  $\beta = 0.500$ ,  $t = 7.255$ ,  $p < .001$ ). It was understood that motivation is critically important in the relationship between both variables.

## 5. Discussion

In Zhang and Chen's (2023) study, they found that digital transformation helps organizations reduce costs, enhance employee productivity, and facilitate human resource planning. Developing technological skills and qualifications helps employees improve their performance and effectiveness (Idowu, 2017). Among many other studies, Liu et al. (2025) demonstrated that enterprise digital transformation has a major effect on employee performance, as well as work and productivity (Liu et al., 2022).

Digital transformation can positively effect employee performance in customer service (Guzmán-Ortiz et al., 2020), according to Guzmán-Ortiz et al. In addition to the findings of Al-kharabsheh et al. (2023), Biyan et al. (2022), and Salju et al. (2023), the analyses conducted as part of the research found that digital transformation had a significant and positive effect on organizational performance as well. Muniroh et al. (2022) and Porkodi et al. (2033) also determined that digital transformation affected organizational performance significantly and positively. Mollah et al. 's (2023) survey of 173 employees found that digital transformation improved organizational performance. According to this study, perceptions of digital transformation do not directly affect organizational performance, despite Mollah et al. 's (2023) claim that digital transformation directly improves organizational performance. Rather, it demonstrated that employee motivation indirectly effects the effect. In a study by Tulungen et al. (2022) with 78 employees of a company in North Sulawesi province, it was concluded that digital transformation boosts organizational performance (Tulungen et al., 2022). Digital leadership is said to affect organizational performance via digital skills, but the perception of digital transformation indirectly influences performance through employee motivation, as Tulungen et al. showed in 2022. According to both results, human-centered intermediary processes are crucial to digital transformation's effect on performance. According to Pham and Vu's research in 2022, digital transformation increased the performance of service-sector employees in Vietnam (Pham & Vu, 2022). Pham and Vu (2022) found that digital leadership significantly effects the effect of digital servitization on organizational performance, as does employee motivation. In both cases, results suggest that digital initiatives have a more indirect influence on performance than they do directly on the individual.

## 6. Conclusions

In this study, it was aimed to examine the effect of employees' perceptions of artificial intelligence-oriented digital transformation (EPADT) on individual job performance (IBP) and organizational performance (OP) and the mediating role of employee motivation in the banking sector in these relationships. In this context, with a human-centered approach, it is aimed to reveal the interaction of research performance results with the psychological mechanism of digital transformation processes

beyond technological explanations.

The research findings revealed that EPADT has a significant and positive direct impact on individual business performance. It has been determined that employees who perceive AI-supported digital transformation positively are more likely to report task achievement levels, achievement of goals, and alignment with organizational goals. However, it has been determined that EPADT has a very strong and statistically significant effect on employee motivation. These results of the research show that digital transformation practices are not only technical or structural interventions, but also powerful motivational tools that can guide employees' work engagement and attitudes.

In the study, it was determined that the direct effect of EPADT on organizational performance was not statistically significant. However, as a result of the mediation analysis, a significant indirect effect was found through motivation. This finding means that AI-powered digital transformation does not directly improve organizational performance, but increases performance outcomes by increasing employee motivation, thus strengthening individual and organizational performance. In addition, it is concluded that motivation is a critical transfer tool that transforms digital transformation perceptions into measurable performance results. In conclusion, the findings of the research support both the importance of integrating digital transformation with human resource management strategies and the motivation theories of their research.

It is thought that our research has made significant contributions to the literature with its methods and results. This research evaluates digitalization as a determinant of technological performance and expands digital transformation research by adding a human-centered explanatory perspective. In the study, the mediating role of motivation was tested using the PLS-SEM method, and as a result, it was determined that AI-supported digital transformation does not directly affect performance, but is instead shaped by internal psychological processes. In addition, the research uses the banking sector sample to determine that digital initiatives are closely related to employee roles and service delivery processes, thus providing a contextual perspective to a sector affected by the technological restructuring process.

When the results of the research are evaluated within the scope of management, it is understood that investments in artificial intelligence technologies are sufficient to strengthen organizational performance. Especially in the banking sector, managers play an important role in determining the change in performance thanks to the digital transformation practices of employee motivation. As a matter of fact, digital transformation strategies should be determined in conjunction with human resources policies that provide training opportunities, increase intrinsic motivation, and encourage employee participation in transformation processes.

According to the results of the research, banks should implement training programs that increase the digital competencies of employees, provide supportive leadership environments that reduce resistance to technological change, and develop transparent communication strategies in artificial intelligence integration. In addition, banks should implement training programs that provide supportive leadership environments, strengthen employees' digital competencies, adapt to technological change, and develop transparent communication strategies in artificial intelligence applications.

However, senior executives and policymakers should accept digital transformation not only as a technological development but also as a socio-technical process and develop change processes accordingly. So much so that when technological investments are aligned with motivational and organizational development initiatives, sustainable competitive advantage can only be achieved.

However, the research has some limitations. The first of these limitations is that the data were obtained using practical sampling from bank employees in Istanbul, which may limit the generalization of the results. However, in future studies, using probabilistic sampling techniques, the research can be expanded to different regions or countries to ensure external validity. The second limitation is that the research is based on self-reported criteria, which can cause widespread method bias. However, when further research involves objective performance indicators or multi-source data, more efficient and general results can be achieved. The third limitation is the limitation of causal inference of cross-sectional design. Longitudinal studies on the subject may allow for deeper insight into how digital transformation perceptions and motivation evolve over time. In this context, in future research, additional mediators such as digital skills, organizational commitment, psychological safety, and

moderators such as leadership style and organizational culture can be examined in order to further clarify the boundary conditions of digital transformation-performance relationships.

The most important result obtained in this research; The success of AI-powered digital transformation in banking depends not only on the technological infrastructure but also on the motivation dynamics of employees. So much so that digital transformation gains strategic meaning when it increases employee motivation, thus increasing both individual and organizational performance. Accordingly, a human-centered and motivation-oriented approach should be adopted to achieve sustainable performance results in organizations that adopt digital transformation.

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***Araştırma Makalesi***

**AI-Driven Digital Transformation in Banking: The Mediating Role of Motivation in the Relationship Between Individual Business and Organizational Performance**

*Bankacılıkta Yapay Zekâ Odaklı Dijital Dönüşüm: Bireysel İş ve Örgütsel Performans Arasındaki İlişkide Motivasyonun Aracılık Rolü*

<p><b>Haldun TURAN</b> Dr. Öğr. Üyesi, İstanbul Rumeli Üniversitesi Mühendislik ve Doğa Bilimleri Fakültesi <a href="mailto:haldun.turan@rumeli.edu.tr">haldun.turan@rumeli.edu.tr</a> <a href="https://orcid.org/0000-0002-0701-7679">https://orcid.org/0000-0002-0701-7679</a></p>	<p><b>Kenan AYDIN</b> Prof. Dr. İstanbul Gelişim Üniversitesi İktisadi, İdari ve Sosyal Bilimler Fakültesi <a href="mailto:keaydin@gelisim.edu.tr">keaydin@gelisim.edu.tr</a> <a href="https://orcid.org/0000-0002-0496-5665">https://orcid.org/0000-0002-0496-5665</a></p>
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**Genişletilmiş Özet**

**Amaç**

Dijital dönüşüm, günümüz işletmelerinde yalnızca teknolojik altyapının yenilenmesini değil; aynı zamanda örgütsel yapılar, iş süreçleri ve çalışan davranışlarında köklü değişimleri içeren çok boyutlu bir dönüşüm sürecini ifade etmektedir. Bu süreç, işletmelerin rekabet avantajı elde etme biçimlerini yeniden şekillendirmekte ve özellikle bilgiye dayalı karar verme mekanizmalarının önemini artırmaktadır. Dijitalleşme ile birlikte örgütler, veriyi stratejik bir kaynak olarak konumlandırmakta; hız, esneklik ve yenilikçilik gibi yetkinlikler performansın temel belirleyicileri hâline gelmektedir. Özellikle yapay zekâ (YZ) temelli uygulamaların hızla yaygınlaşması, bankacılık sektörü başta olmak üzere hizmet sektörlerinde karar verme süreçlerini, operasyonel etkinliği ve müşteri ilişkilerini önemli ölçüde dönüştürmektedir. Algoritma temelli analizler, otomasyon sistemleri ve veri odaklı karar destek mekanizmaları, örgütlerin performans hedeflerine ulaşmasında belirleyici unsurlar hâline gelmiştir. Bununla birlikte, dijital dönüşüm süreçlerinin örgütler açısından her zaman beklenen sonuçları üretmediği ve aynı teknolojik yatırımların farklı işletmelerde farklı performans çıktıları doğurabildiği gözlemlenmektedir. Bu durum, dijital dönüşümün yalnızca teknik kapasiteye indirgenemeyeceğini; çalışanların bu süreci nasıl algıladıkları, benimsedikleri ve içselleştirdikleriyle yakından ilişkili olduğunu göstermektedir. Ancak dijital dönüşüm literatüründe, bu teknolojik ilerlemelerin performans çıktıları üzerindeki etkileri sıklıkla ele alınmasına rağmen, söz konusu etkinin hangi psikolojik ve örgütsel mekanizmalar aracılığıyla ortaya çıktığı yeterince açıklığa kavuşturulamamıştır. Mevcut çalışmaların önemli bir bölümü, dijitalleşmeyi teknik bir süreç olarak ele almakta ve çalışanları bu sürecin pasif uygulayıcıları olarak konumlandırmaktadır. Oysa dijital dönüşüm, çalışanların algıları, tutumları, öğrenme kapasiteleri ve motivasyon düzeyleriyle doğrudan ilişkili bir sosyo-teknik süreçtir. Çalışanların dijital teknolojileri tehdit ya da fırsat olarak algılamaları, bu süreçte sergiledikleri davranışları ve performans düzeylerini belirleyici bir rol oynamaktadır. Bu bağlamda çalışanların dijital dönüşümü nasıl algıladıkları ve bu algının motivasyon gibi bireysel değişkenler üzerinden performansa nasıl yansıdığı, üzerinde durulması gereken kritik bir araştırma alanı olarak öne çıkmaktadır.

Bu çalışmanın temel amacı, bankacılık sektöründe çalışanların Yapay Zekâ Odaklı Dijital Dönüşüm Algılarının (YZDDA) bireysel iş performansı (BİP) ve örgütsel performans (ÖP) üzerindeki etkisini incelemek ve bu ilişkide motivasyonun aracılık rolünü ortaya koymaktır. Dijital dönüşüm çalışmalarının önemli bir kısmı, teknolojik yatırımların performans üzerindeki doğrudan etkilerine odaklanmakta; insan faktörünü ise ikincil bir unsur olarak ele almaktadır. Oysa dijital dönüşüm süreçleri, çalışanların algıları, tutumları ve motivasyon düzeyleriyle yakından ilişkilidir. Bu çalışma, YZ temelli dijital

dönüşüm algısının performans çıktıları üzerindeki etkisinin doğrudan mı yoksa çalışan motivasyonu aracılığıyla mı ortaya çıktığını test ederek, dijital dönüşüm literatürüne insan merkezli ve davranışsal bir bakış açısı kazandırmayı amaçlamaktadır. Bu yönüyle çalışma, dijital dönüşümün yalnızca teknolojik değil, aynı zamanda örgütsel ve psikolojik bir süreç olduğunu vurgulamaktadır.

### Yöntem

Araştırma nicel araştırma deseni kapsamında gerçekleştirilmiştir. Çalışmanın evrenini, İstanbul’da faaliyet gösteren bankacılık kurumlarında çalışan mavi ve beyaz yakalı personel oluşturmaktadır. Bankacılık sektörü, YZ tabanlı dijital uygulamaların yoğun biçimde kullanıldığı, dijitalleşmenin stratejik düzeyde ele alındığı ve çalışanların teknolojiyle etkileşiminin yüksek olduğu bir alan olması nedeniyle özellikle tercih edilmiştir. Bu sektör, dijital dönüşümün insan kaynakları ve performans üzerindeki etkilerinin gözlemlenmesi açısından uygun bir araştırma bağlamı sunmaktadır. Araştırmada, erişilebilirlik ve gönüllülük esasına dayalı olarak kolayda örnekleme yöntemi benimsenmiş ve toplam 284 katılımcıya ulaşılmıştır. Örneklem büyüklüğü, PLS-SEM analizleri için önerilen asgari örneklem yeterlilik kriterlerini karşılamaktadır. Veri toplama süreci etik kurul onayı alınarak yürütülmüş, katılımcılara gizlilik ve gönüllülük esasları açık biçimde bildirilmiş ve verilerin yalnızca bilimsel amaçlarla kullanılacağı ifade edilmiştir. Veriler, YZ odaklı dijital dönüşüm algısı, motivasyon, bireysel iş performansı ve örgütsel performans değişkenlerini ölçen toplam 26 maddelik, beşli Likert tipi ölçekten oluşan yapılandırılmış anket aracılığıyla toplanmıştır. YZ odaklı dijital dönüşüm algısı, çalışanların kurumlarında kullanılan yapay zekâ uygulamalarına ilişkin yetkinlik, eğitim, altyapı ve kullanım düzeylerine yönelik algılarını ölçmektedir. Motivasyon değişkeni, öz-belirleme kuramı çerçevesinde geliştirilen içsel motivasyon ölçeği ile değerlendirilmiştir. Bireysel iş performansı ve örgütsel performans ise, çalışanların kendi algılarına dayalı olarak performans hedeflerine ulaşma, örgütsel hedeflere katkı sağlama ve genel örgütsel çıktıları değerlendirmelerine imkân tanıyan öznel performans göstergeleriyle ölçülmüştür. Verilerin analizinde SmartPLS 4 yazılımı kullanılarak Kısmi En Küçük Kareler Yapısal Eşitlik Modellemesi (PLS-SEM) yaklaşımı benimsenmiştir. PLS-SEM yöntemi, karmaşık yapısal modellerin test edilmesine olanak sağlaması, görece küçük ve orta büyüklükteki örneklerle çalışabilmesi ve çok değişkenli normal dağılım varsayımına duyarlı olmaması nedeniyle tercih edilmiştir. Analiz sürecinde öncelikle ölçüm modeli değerlendirilmiş; Cronbach’s Alpha, bileşik güvenilirlik (CR) ve ortalama açıklanan varyans (AVE) değerleri incelenerek ölçüklerin içsel tutarlılığı ve yakınsak geçerliliği test edilmiştir. Ayrışma geçerliliği ise Fornell–Larcker kriteri ve Heterotrait–Monotrait (HTMT) oranları kullanılarak değerlendirilmiştir. Elde edilen bulgular, tüm yapıların önerilen eşik değerleri karşıladığını ve ölçüm modelinin geçerli ve güvenilir olduğunu göstermektedir. Yapısal modelin değerlendirilmesinde yol katsayıları, bootstrap yöntemiyle elde edilen t ve p değerleri esas alınmış; ayrıca SRMR, NFI ve GoF gibi uyum iyiliği indeksleri hesaplanmıştır. Model uyumuna ilişkin göstergeler, araştırma modelinin genel olarak iyi uyum sergilediğini ve yapısal ilişkilerin istatistiksel olarak test edilebilir düzeyde olduğunu ortaya koymuştur.

### Bulgular

Araştırma bulguları, çalışanların YZ odaklı dijital dönüşüm algılarının bireysel iş performansı üzerinde anlamlı ve pozitif bir etkiye sahip olduğunu göstermektedir. Ayrıca YZDDA’nın çalışan motivasyonu üzerinde oldukça güçlü ve istatistiksel olarak anlamlı bir etkisi olduğu tespit edilmiştir. Motivasyon değişkeninin hem bireysel iş performansı hem de örgütsel performans üzerinde anlamlı ve pozitif etkiler yarattığı görülmüştür. Buna karşın, YZDDA’nın örgütsel performans üzerindeki doğrudan etkisi istatistiksel olarak anlamlı bulunmamıştır. Ancak dolaylı etkiler incelendiğinde, motivasyonun YZDDA ile örgütsel performans arasındaki ilişkide tam aracılık rolü üstlendiği ortaya konmuştur. Diğer bir ifadeyle, YZ odaklı dijital dönüşüm algısı örgütsel performansını doğrudan etkilememekte; bu etki, çalışan motivasyonu aracılığıyla dolaylı olarak ortaya çıkmaktadır. Bu bulgu, dijital dönüşümün performans üzerindeki etkisinin mekanik ve otomatik bir süreç olmadığını; çalışanların algıları ve motivasyon düzeyleriyle şekillendiğini göstermesi bakımından önemlidir. Araştırma sonuçları, dijital dönüşüm literatüründe insan faktörünün önemini vurgulayan çalışmaları desteklemekte ve YZ temelli dijital dönüşümün performans çıktıları üzerindeki etkisini açıklamada motivasyonu kritik bir ara değişken olarak konumlandırmaktadır. Uygulayıcılar açısından değerlendirildiğinde, elde edilen bulgular bankacılık sektöründe dijital dönüşüm stratejilerinin yalnızca teknolojik yatırımlara odaklanmasının yeterli olmadığını göstermektedir. Dijital dönüşümün örgütsel performansa yansımaları, çalışanların bu

süreci nasıl algıladıkları ve ne ölçüde motive olduklarıyla yakından ilişkilidir. Bu nedenle yöneticilerin, YZ temelli uygulamaları hayata geçirirken çalışanların katılımını teşvik eden, öğrenme ve gelişimi destekleyen, şeffaf iletişim ve destekleyici liderlik anlayışını benimseyen insan kaynakları politikalarına öncelik vermeleri gerekmektedir. Eğitim programları, yetkinlik geliştirme faaliyetleri ve çalışanların dijital dönüşüm süreçlerine aktif katılımını sağlayan uygulamalar, motivasyonu artırarak performans çıktılarının güçlenmesine katkı sağlayacaktır.

## **Sonuç**

Araştırma sonuçları, bankacılık sektöründe yapay zekâ (YZ) temelli dijital dönüşüm süreçlerinin başarısının yalnızca teknolojik altyapı yatırımlarıyla açıklanamayacağını; çalışan motivasyonunun bu süreçte kritik bir belirleyici mekanizma olduğunu ortaya koymaktadır. Çalışanların dijital dönüşümü olumlu algılamaları motivasyon düzeylerini artırmakta; artan motivasyon ise hem bireysel iş performansına hem de örgütsel performansa yansımaktadır. Özellikle motivasyonun tam aracılık rolü üstlenmesi, YZ odaklı dijital dönüşümün performans çıktılarının doğrudan değil, çalışanların içsel psikolojik süreçleri aracılığıyla şekillendiğini göstermektedir. Bu bulgu, dijital dönüşümün mekanik ve otomatik bir performans artırıcı olmadığı; insan faktörüyle bütünleştiğinde stratejik anlam kazandığı yönündeki sosyo-tekniik yaklaşımı desteklemektedir. Çalışma, dijitalleşmeyi yalnızca teknolojik bir modernizasyon süreci olarak değil, aynı zamanda örgütsel davranış ve insan kaynakları dinamikleriyle etkileşim içinde gelişen bir dönüşüm olarak ele alarak literatüre insan merkezli bir katkı sunmaktadır. PLS-SEM yöntemiyle motivasyonun aracılık rolünün test edilmesi, dijital dönüşüm–performans ilişkisine davranışsal ve psikolojik bir açıklama çerçevesi kazandırmaktadır. Ayrıca araştırmanın İstanbul'daki bankacılık sektörü örnekleminde yürütülmüş olması, dijital uygulamaların çalışan rolleri ve hizmet sunum süreçleriyle doğrudan ilişkili olduğu teknoloji yoğun bir sektörde bağlamsal katkı sağlamaktadır. Yönetimsel açıdan değerlendirildiğinde, elde edilen bulgular YZ yatırımlarının tek başına örgütsel performansı artırmaya yeterli olmadığını göstermektedir. Dijital dönüşüm stratejilerinin, çalışanların içsel motivasyonunu güçlendirecek eğitim programları, yetkinlik geliştirme uygulamaları, destekleyici liderlik anlayışı ve şeffaf iletişim politikalarıyla bütünleşik biçimde tasarlanması gerekmektedir. Çalışanların dönüşüm sürecine aktif katılımını sağlayan ve teknolojik değişimi tehdit değil fırsat olarak algılamalarını destekleyen uygulamalar, sürdürülebilir performans sonuçlarının temelini oluşturmaktadır. Bununla birlikte araştırma bazı sınırlılıklar barındırmaktadır. Verilerin İstanbul'daki bankacılık çalışanlarından kolayda örnekleme yöntemiyle elde edilmiş olması bulguların genellenebilirliğini sınırlandırabilir. Ayrıca verilerin öz-bildirim temelli olması olası ortak yöntem yanlılığı riskini beraberinde getirmektedir. Kesitsel tasarım ise nedensel çıkarımlar açısından sınırlılık oluşturmaktadır. Gelecek araştırmalarda boylamsal tasarımlar, çok kaynaklı veri setleri ve dijital yetkinlik, örgütsel bağlılık, psikolojik güvenlik veya liderlik tarzı gibi ek değişkenlerin modele dahil edilmesi, dijital dönüşüm–performans ilişkisinin sınır koşullarını daha derinlemesine ortaya koyacaktır.

Sonuç olarak, bankacılık sektöründe YZ temelli dijital dönüşümün stratejik başarısı, teknolojik altyapıdan ziyade çalışanların motivasyon dinamikleriyle şekillenmektedir. Dijital dönüşüm, çalışan motivasyonunu güçlendirdiği ölçüde hem bireysel hem de örgütsel performansı artırmakta; bu nedenle sürdürülebilir rekabet avantajı için insan merkezli ve motivasyon odaklı bir dönüşüm yaklaşımının benimsenmesi gerekmektedir.