

The Impact of Digital Transformation on Job Insecurity and Employability in Call Centers

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Abstract:

The aim of this research is to examine the effect of digital transformation perceptions of call center employees on their job insecurity and perceived employability levels. For this purpose, 293 data were collected from the employees of the call center operating in Konya by applying a simple random sampling method. In the questionnaire applied as a data collection method, there are demographic questions to get to know the participants, digital transformation scale, job insecurity scale and employability perception scale. Research hypotheses were tested regression analysis. As a result of the analyzes, it has been determined that digital transformation has a significant effect on the job insecurity and employability perception levels of call centers employees.

Background: The aim of this research is to reveal whether digital transformation has an impact on the perception of job insecurity and employability of employees in the service sector. In this context, the effect of digital transformation on employees' job insecurity and employability perception levels was examined. The research was conducted in call centers, which are among the businesses where information technologies are used most intensively. With these results obtained, it is hoped that this study will be a guide for future researchers to identify similar situations in different sectors.

Materials and methods: Research data was collected by survey method. The survey was prepared as both a web-based and physical survey. A total of 293 survey formulas were filled in for the research. However, incomplete, inconsistent and incorrectly filled survey forms were excluded from the scope of the research. A total of 240 survey formulas were evaluated. The survey includes four sections consisting of demographic questions, digital transformation performance, job insecurity behavior and employability structure. During the data analysis phase, firstly the surveys were examined. As a result of this review, 240 surveys were deemed suitable for inclusion in the analysis and all 240 surveys were included in the analysis. SPSS 21.0 program was used to analyze the data obtained from the surveys. In the study, central tendency measures were used to classify the demographic characteristics of the participants, and frequency and percentage distributions were examined in this context. Regression analysis was conducted to examine the effects of digital transformation on job insecurity and employability.

Results: When the findings shown in Table 6 are examined, it is seen that the linear combination of the digital transformation level significantly predicts job insecurity ($R^2=0.570$, $p<0.05$). According to the results, the independent variable explains 57% of the variation in the dependent variable. Accordingly, it is understood that the level of digital transformation explains 57% of the variance in employees' perception of job insecurity, in other words, the level of job insecurity is shaped by digital transformation at a rate of 57%. We can put this result in simpler terms: a one standard deviation increase in the level of digital transformation will have an impact of 0.570 standard deviations on the employee's job insecurity. If the relationship between variables is to be formulated; $F=470.80$; The equation $p<0.01$ can be created. When the findings shown in Table 6 are examined, it is seen that the linear combination of the digital transformation level significantly predicts the perception of employability ($R^2=0.443$, $p<0.05$). According to the results, the independent variable explains 44% of the variation in the dependent variable. Accordingly, it is understood that the level of digital transformation explains the variance of employees' employability perception by 44%, in other words, the level of employability perception is shaped by digital transformation at a rate of 44%. We can put this result in simpler terms: a one standard deviation increase in the level of digital transformation will have an impact of 0.443 standard deviations on the employee's employability perception. If the relationship between variables is to be formulated; $F=431,395$; The equation $p<0.01$ can be created.

Conclusion: In the research, regression analysis was performed to see the impact of digital transformation on job insecurity and employability perception and the main hypotheses developed in this context were evaluated. As a result, digital transformation significantly affects job insecurity and employability, and in this context, the level of digital transformation of employees explains the variance of job insecurity by 57%; It was determined that the level of digital transformation explained the variance in employability by 44%. In this context, it has been determined that digital transformation has a positive and significant effect on job insecurity, and as the

level of digitalization of employees increases, the perception of job insecurity also increases. Based on these results, " H₁" was created within the scope of the research. "Digital transformation has an impact on job insecurity." The hypothesis was accepted. At the same time, it has been determined that digital transformation has a negative and significant effect on employability, and as the level of digitalization of employees increases, the perception of employability decreases. Based on these results, " H₂" was created within the scope of the research. Digital transformation has an impact on employability." The hypothesis was accepted.

Key words: *Digital transformation, job insecurity, employability, call centers.*

Date of Submission: 21-05-2024

Date of Acceptance: 31-05-2024

I. Introduction

It refers to digital transformation, digitalization and the economic and social conditions of digitalization. Digitalization is the use of digital technologies and data as well as interconnections that result in new activities or changes in existing activities.¹ Digital transformation has changed the production, marketing and sales methods of businesses operating in the commercial, industrial and services sectors. Digital transformation has penetrated goods and services, created a knowledge economy and affected all sectors.² Digital transformation has significant impacts in both economic and social areas. These influences are constantly evolving, redefining old digital methods. In terms of digital transformation conditions, it is both a competitive tool and an effective factor in their survival.³

Digital transformation is the incorporation of computer-based technologies into a business' products, processes and strategies. Businesses must achieve digital transformation to better engage and serve their customers and thus improve their competitive capabilities.⁴ It is a clear fact that online business strategies are adapting to a new digital reality.⁵

Therefore, employees operating according to old methods are forced to adapt themselves to this newly developing situation. The employability of newly employed people depends on the infrastructure and education that are ready or can easily adapt to this transformation. This has become a necessity for businesses. It can be said that the ability of employees to keep up with this constant change depends on their education, age, skills and job competencies. The effect of this rapid development created by digital transformation causes employees to perceive job insecurity depending on whether they can acquire these skills or not. These broad effects caused by digital transformation not only enable people to achieve this competence through their individual efforts, but also impose important duties on government institutions.

Digital transformation causes both social, political and economic transformations in the duties of the state. However, these opportunities also bring with them various risks such as production, international competition and employment. In the declaration of the meeting held at the ministerial level of the OECD Council of Ministers, digital transformation will be implemented in the following areas of activity: It is stated that it will create and encourage transformations. These areas; innovation and productivity growth, public services improvement, improving social welfare (transition to renewable energy, care for the aging population, efficiency and transparency in government services).⁶

The term employability has been defined from many different perspectives. As the competencies required by digital transformation and job competition increase in all sectors, the concept of employability has become more important. The subject has generally been addressed from two different perspectives. The first is the person's perception of his employability from his own perspective. That is, individuals seeking a particular type of job perceive their chances of success and what factors influence this. Thus, self-perceived employability is defined as "one's perceived ability to achieve sustainable employment appropriate to one's level of competence." The second is that employability is a multifaceted concept that has both internal and external dimensions. These studies are research on employability covering government policies and corporate human resources strategies. Because internal factors of job seekers include professional or job-related knowledge and skills, job search mastery and learning potential. As a result, employability can be stated as a person's "self-belief" as it is based on the individual's self-perceptions.⁷

Employability is very important for individuals to cope with job insecurity. Wittekind et al empirically tested the determinants of employability. In their studies, Wittikend et al. stated that education, career, talent and skill development are important determinants of employability. However, they determined that willingness to develop new competencies, opportunity awareness, and self-presentation ability failed to predict perceived employability.⁸ On the other hand, Fugate et al.⁹ stated that employability has a structure consisting of three dimensions: career identity, personal adaptation, social and human capital. Employability represents a form of job-specific (pro)active adaptation and consists of the relationships between these dimensions. According to Hillage and Pollard (1998), the concept of employability is the ability to act self-sufficiently in the labor market to create potential for sustainable employment. Employability for an individual depends on the knowledge, skills and attitudes they have, the way they use these assets and present them to employers, and the environment in which they seek employment. These are: the individual's employability assets (knowledge, skills, attitudes), career management skills, personal presentation and personal circumstances (who you are, your responsibility, the labor market, etc.).¹⁰

The perception of job insecurity is defined from different perspectives and there is no generally accepted definition. However, it can be said that most definitions have common aspects. Greenhalgh and Rosenblatt, who carried out pioneering studies on this subject, presented the conceptual framework on job insecurity in 1984. According to their definition, job insecurity is expressed as "the perceived powerlessness to maintain desired continuity in a threatened job situation". Greenhalgh and Rosenblatt also suggested that job insecurity should be further differentiated according to the specific areas under threat, and two of these dimensions were later labeled quantitative and qualitative job insecurity by Hellgren, Sverke, and Isaksson (1999). Theoretically, the two dimensions of job insecurity may differ in how they are defined and how they are associated with outcomes. Definitions of job insecurity include situations such as potential loss of continuity in job status, permanent loss of job, loss of some subjective characteristics of the job.¹¹

However, the term job insecurity used in our research occurs in cases of involuntary job loss. Technological developments and digital transformation are seen as one of the factors that have the power to affect the perception of job insecurity, as well as employability.¹² It is a generally accepted fact that digital transformation affects a large part of economic activities, including marketing and sales, as well as production. For this reason, managers as well as their employees need to follow the digital transformation in the sectors in which they are employed and improve their knowledge and skills in order to avoid fear of job insecurity.

Greenhalgh and Rosenblatt are among the rare researchers who state that job insecurity is a factor that affects not only employees but also the companies and institutions they work for.¹³ Accordingly, the research aimed to examine the impact of call center employees' digital transformation perceptions on their job insecurity and perceived employability levels. Based on the purpose of the research, the following research model was created. Based on the research model, the following hypotheses were developed:

H₁: Digital transformation perceptions of call center employees have an impact on job insecurity levels.

H₂: Call center employees' digital transformation perceptions have an impact on their perceived employability levels.

The research model developed within the scope of the hypotheses described above is shown in Figure 1

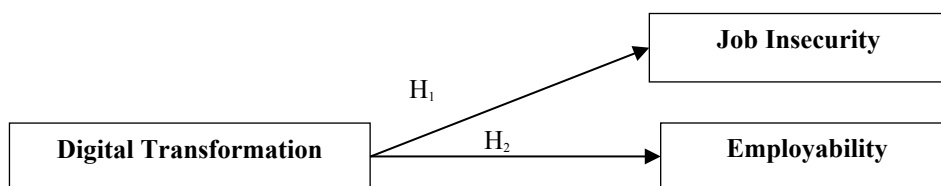


Figure 1. Model of the Study

II. Material And Methods

Purpose and Importance of the Research

The aim of this research is to reveal whether digital transformation has an impact on the perception of job insecurity and employability of employees in the service sector. In this context, the effect of digital transformation on employees' job insecurity and employability perception levels was examined. Quantitative research method was used in the research. The research questions developed to achieve this aim are as follows:

- Does digital transformation have an impact on job insecurity in call centers?
- Does digital transformation have an impact on the perception of employability in call centers?

The research was conducted in call centers, which are among the businesses where information technologies are used most intensively. With these results obtained, it is hoped that this study will be a guide for future researchers to identify similar situations in different sectors.

The Universe and Sample of the Research

The population of this research consists of call center employees in businesses operating in Konya. The reason why call center employees were chosen as the population in the research is that they are exposed to advanced technology in their working systems. Simple random sampling method was used in the research, and call center employees in Konya and 240 employees who were willing to participate in the survey constituted the sample of the research. Findings regarding the demographic characteristics of the research participants are presented in Table 1.

Table 1 Demographic Characteristics of the Participants (n =240)

Demographic Characteristics		n	%
Gender	Woman	22	9,1
	Man	218	90,8
Marital Status	Married	98	40,5
	Single	142	59,4
Age	18-25 age	46	18,8
	26-29 age	82	34,3
	30-35 age	86	36,4
	36-40 age	26	10,87
	41-65 age	-	-
Education	Primary /secondary school	-	-
	High school	61	24,6
	Associate degree	181	75,3
	Bachelor	-	-
	Master	-	-
Job Duration	Less than 1 year	17	7,11
	1-5 years	102	42,6
	6-10 years	40	20,5
	11-15 years	106	43,8
	16 years and above	-	-
Total		240	100,00

According to the findings from Table 1, 9,1% of the participants were women and 90.8% were men; 40.5% were married and 59.4% were single; 53% of them are defined as young; 75,3% were university graduates; It was determined that 7 % of them had 1-5 years of professional experience. The research was conducted after obtaining the permission of Selçuk University Ethics Committee numbered 689327.

Data Collection Tool Used in the Research

Research data was collected by survey method. The survey was prepared as both a web-based and physical survey. A total of 293 survey forms were filled out for the research. However, incomplete, inconsistent and incorrectly filled survey forms were excluded from the scope of the research. A total of 240 survey forms were evaluated. The survey form includes four sections consisting of demographic questions, digital transformation scale, job insecurity scale and employability scale. The digital transformation scale included in the survey form is based on Nadeem et al. (2018) with 12 expressions and a 5-point Likert type. The scale was evaluated on a five-point Likert type (5 = Strongly agree, 4 = Agree, 3 = Undecided, 2 = Disagree, 1 = Strongly

disagree). The scale was adapted into Turkish by Sağlam 2021. The Cronbach alpha coefficient of the scale is 0.954 (Sağlam, 2021). The job insecurity scale was developed by De Witte (2000) and was prepared as a 4-item, 5-point Likert type. The scale was evaluated on a five-point Likert type (5 = Strongly agree, 4 = Agree, 3 = Undecided, 2 = Disagree, 1 = Strongly disagree).

The Cronbach alpha reliability coefficient of the scale is 0.94 (De Witte, 2000:325-350). In order to determine the employability perceptions in the last section, the employability scale developed by Berntson and Marklund (2007) was used. The one-dimensional scale was prepared as a 5-point Likert type, consisting of 6 statements. The scale was evaluated on a five-point Likert type (5 = Strongly agree, 4 = Agree, 3 = Undecided, 2 = Disagree, 1 = Strongly disagree). The Cronbach alpha reliability coefficient of the scale was determined to be 0.875 (Berntson and Marlund, 2007). Before applying the scale used in the research, a pilot application was carried out. In this regard, surveys were administered to 30 call center employees in 30 different businesses. Within the scope of the findings obtained through face-to-face interview method, it was seen that all the statements in the survey were understandable. Accordingly, no changes were made to the survey form.

Data analysis

During the data analysis phase, firstly the surveys were examined. As a result of this review, 240 surveys were deemed suitable for inclusion in the analysis and all 240 surveys were included in the analysis. SPSS 21.0 program was used to analyze the data obtained from the surveys.

In the study, central tendency measures were used to classify the demographic characteristics of the participants, and frequency and percentage distributions were examined in this context. Regression analysis was conducted to examine the effects of digital transformation on job insecurity and employability.

Number of Validity and Reliability Tests of the Scales

In order to test the validity of the scales used in the research, exploratory factor analysis was applied to three scales. Kaiser-Meyer-Olkin (KMO) and Bartlett test values of all three scales are shown in Table 2. Accordingly, the KMO test value of the Digital transformation scale was determined as 0.895 and the Bartlett test value was determined as $\chi^2 = 1381.678$, $df = 17$, $p = 0.000$. The KMO value of the job insecurity scale was determined as 0.951 and the Bartlett test value was $\chi^2 = 4118.5811$, $df = 357$, $p = 0.000$. The KMO value of the employability scale was determined as 0.907 and the Bartlett test value was $\chi^2 = 4167.581$, $df = 355$, $p = 0.000$. These obtained values revealed that all three scales used in the research were suitable for factor analysis.

Table 2 KMO and Barlett Test Values of the Scales

Scale	KMO	Bartlett Test		
		Chi Square	df	p
Digital Transformation Scale	,895	1381,678	17	,000
Job Insecurity Scale	,951	4118,581	57	,000
Employability Scale	,907	4167,581	355	,000

Factor analysis findings of the digital transformation scale used in the research are presented in Table 3. According to the obtained factor analysis values, the digital transformation scale items were collected in a single dimension as in the original scale. The variance explanation rate of the scale was determined as 77.119%.

Table 3. Factor Analysis of Digital Transformation Scale

Digital Transformation Scale	Factor Loads
DT 1	,817
DT 2	,872
DT 3	,861
DT 4	,847
DT 5	,879
DT 6	,889
DT 7	,820
DT 8	,842
DT 9	,871
DT 10	,877
DT 11	,869
DT 12	,882

Disclosed Total Variance Rate: 77,119, Method: Principal Components Analysis Rotation Method: Varimax Rotation

Factor analysis findings of the job insecurity scale used in the research are presented in Table 4. According to the factor analysis values obtained, the job insecurity scale items were collected in a single dimension, as in the original scale. The variance explanation rate of the scale was determined as 79.111%.

Table 4. Factor Analysis of Job Insecurity Scale

Job Insecurity Scale	Factor Loads
JI 13	,810
JI 14	,765
JI 15	,871
JI 16	,894

Disclosed Total Variance Rate: 79,111, Method: Principal Components Analysis Rotation Method: Varimax Rotation

Table 5 Factor Analysis of Employability Scale

Employability Scale	Factor Loads
E 17	,717
E 18	,731
E 19	,734
E 20	,770
E 21	,745
E 22	,849

Disclosed Total Variance Rate: 82,336, Method: Principal Components Analysis Rotation Method: Varimax Rotation

Factor analysis findings of the employability scale used in the research are presented in Table 5. According to the factor analysis values obtained, the job insecurity scale items were collected in a single dimension, as in the original scale. The variance explanation rate of the scale was determined as 82.336%. According to the Pearson correlation analysis findings, a statistically significant and positive relationship was detected between employees' digital transformation and job insecurity ($r=0.519$; $p=0.000$). Additionally, digital transformation was found to have a statistically significant and negative relationship with employability perception ($r= -0.524$; $p=0.000$). When Cronbach Alpha values are examined, it is seen that the internal consistency coefficient of the digital transformation scale used in the research is .937, the internal consistency coefficient of the job insecurity scale is .943, and the internal consistency coefficient of the employability scale is .797. Accordingly, it was determined that all three scales had a high level of reliability.

III. Result

In our research, regression analysis was conducted to see the effects of digital transformation on job insecurity and employability perception. In the analysis, job insecurity and employability perception were taken as dependent variables, and digital transformation was taken as independent variables. The findings obtained are shown in Table 6.

Table no6 Regression Findings Related to the Effect of Digital transformation on Job Insecurity and Employability

Dependent variable	R ²	Independent variable	B	Std. Error	t	p	F
Job insecurity	0,570	Digital transformation	,470	,033	21,69	0,000	470,80
Employability	0,443	Digital transformation	-,353	,280	4,439	,000	431,395

When the findings shown in Table 6 are examined, it is seen that the linear combination of the digital transformation level significantly predicts job insecurity ($R^2=0.570$, $p<0.05$). According to the results, the independent variable explains 57% of the variation in the dependent variable. Accordingly, it is understood that the level of digital transformation explains 57% of the variance in employees' perception of job insecurity, in other words, the level of job insecurity is shaped by digital transformation at a rate of 57%. We can put this result in simpler terms: a one standard deviation increase in the level of digital transformation will have an impact of 0.570 standard deviations on the employee's job insecurity. If the relationship between variables is to be formulated; $F=470.80$; The equation $p<0.01$ can be created. When the findings shown in Table 6 are examined, it is seen that the linear combination of the digital transformation level significantly predicts the perception of employability ($R^2=0.443$, $p<0.05$).

According to the results, the independent variable explains 44% of the variation in the dependent variable. Accordingly, it is understood that the level of digital transformation explains the variance of employees' employability perception by 44%, in other words, the level of employability perception is shaped by digital transformation at a rate of 44%. We can put this result in simpler terms: a one standard deviation increase in the level of digital transformation will have an impact of 0.443 standard deviations on the employee's

employability perception. If the relationship between variables is to be formulated; $F=431,395$; The equation $p<0.01$ can be created.

IV. Conclusion

The aim of this research is to examine the effect of digital transformation on job insecurity and employability perception among call center employees. The population of the research consists of call center employees, who are one of the most exposed to digital transformation. Due to time and cost constraints, it was decided to make a geographical limitation on the population and apply it to call center staff in businesses operating in Konya. Simple random sampling method was used in the research and 240 employees working in Konya and willing to participate in the survey constituted the sample of the research ($n = 240$). Surveys were collected by face-to-face interview method. The data obtained from the surveys were first subjected to validity and reliability analysis. The findings showed that all three scales used in the study were sufficiently valid and reliable. In the research, regression analysis was performed to see the impact of digital transformation on job insecurity and employability perception and the main hypotheses developed in this context were evaluated.

As a result, digital transformation significantly affects job insecurity and employability, and in this context, the level of digital transformation of employees explains the variance of job insecurity by 57%; It was determined that the level of digital transformation explained the variance in employability by 44%. In this context, it has been determined that digital transformation has a positive and significant effect on job insecurity, and as the level of digitalization of employees increases, the perception of job insecurity also increases. Based on these results, "H₁" was created within the scope of the research. "Digital transformation has an impact on job insecurity." The hypothesis was accepted. At the same time, it has been determined that digital transformation has a negative and significant effect on employability, and as the level of digitalization of employees increases, the perception of employability decreases. Based on these results, "H₂" was created within the scope of the research. Digital transformation has an impact on employability." The hypothesis was accepted.

But looking at the research in the literature¹⁴investigated¹⁵ this relationship in his thesis titled The Effect of Digitalization on Perceived Job Insecurity: The Regulatory Effect of Corporate Communication. The results concluded that overall, high use of digital devices does not lead to increased subjective job insecurity. Job insecurity and employability are also subject to examination from different perspectives regarding employees. It did not detect a relationship between digitalization and job insecurity. The effect of digital transformation on employment and job types in the banking sector in India. No relevant technology has been found to cause technological unemployment.¹⁶

In this way, the studies carried out and the results obtained from this research show that digital performance is of interest to employees in many different branches of activity such as manufacturing, service and trade. Increasingly developing and renewed technologies and the resulting new business systems push both employees and businesses to address this issue. The way to cope with the changes brought about by digital transformation is for employees to follow the changes and increase their knowledge and skills in order to avoid fears of job insecurity and lack of employment. Of course, this can be achieved not only by the employees' own efforts, but also by the efforts of the authorities and their support in this regard.

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