Retention of Public IT Professionals: The Mediating Roles of Perceived Organisational Support and Psychological Empowerment[1]

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Kamu Bilişim Uzmanlarının Elde Tutulması: Algılanan Örgütsel Destek ve Psikolojik Güçlendirmenin Aracılık Rolü[2]

Abstract

The demand for skilled IT professionals remains strong in a global manner. Therefore, recruiting and retention of IT professionals are vital for many organisations. The research data was collected from 361 IT professionals employed in 31 public institutions with large-scale IT units in Türkiye. The results indicated that 40.7% of public IT professionals are considering leaving their current jobs in Türkiye. It was observed that POS fully mediated the relationship between LMX and the turnover intentions of public IT professionals. Moreover, contrary to the literature, enhancing employee competency increased the intention to leave ($\beta = .27$, $p < .05$) rather than decreasing it.

Keywords : Perceived Organizational Support, Psychological Empowerment, Leader-Member Exchange, Turnover Intentions, IT Professionals, Public Sector.

JEL Classification Codes : D23, J24, J63, M15, O15.

Öz

Yetenekli bilişim uzmanlarına olan talep, küresel manada yüksek olmaya devam etmektedir. Bu nedenle, birçok kuruluş için bilişim uzmanlarının işe alınması ve elde tutulması hayati önem arz ediyor. Araştırma verileri, Türkiye'de büyük ölçekli bilişim birimlerine sahip 31 kamu kurumunda çalışan 361 bilişim çalışanından elde edilmiştir. Sonuçlar, Türkiye kamu bilişim sektöründeki uzmanların %40,7'sinin mevcut işlerini bırakmayı düşündüklerini göstermiştir. Bulgular, algılanan örgütsel desteğin işten ayrılma niyeti ile lider-üye etkileşimi (LMX) arasındaki ilişkide tam aracılık rolü üstlendiğini ortaya çıkarmıştır. Ayrıca, literatürün aksine, çalışan yetkinliklerinin artırılması, bilişim çalışanlarının işten ayrılma niyetini azaltmamakta, tersine artırmaktadır ($\beta = .27$, $p < .05$).

Anahtar Sözcükler : Algılanan Örgütsel Destek, Psikolojik Güçlendirme, Lider-Üye Etkileşimi, İşten Ayrılma Niyeti, Bilişim Uzmanları, Kamu Sektörü.

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1. Introduction

Information technologies (IT) based organisational activities are constantly increasing. Without IT systems, it is hard to imagine how to carry out daily business tasks, communicate with colleagues and access necessary information in today's digital workplaces. The improvements in IT naturally increase the demand for skilled IT workers. This skilled IT labour demand growth causes skill shortages, leading to competition for skilled IT workers globally. As a result, recruitment and retention of highly qualified IT workers become a significant concern for many public, private and non-governmental organisations.

Social exchange theory provides a powerful framework to explain the relationship between several theories and employees' turnover intentions. Perceived organisational support (POS), leader-member exchange (LMX), and psychological empowerment (PE) are three fundamental constructs defined in social exchange theory. These three constructs are among the most significant factors that reduce turnover intentions (Erturk & Vurgun, 2015). However, POS, LMX and PE may separately influence each other and also each other's relationship with turnover intention. Therefore, it is essential to identify how and to what extent these factors influence, moderate, or mediate their relationship with turnover intention. Nevertheless, there is limited research in the literature concerning the complex relations among these factors (Calisir et al., 2011; Erturk, 2014; Erturk & Vurgun, 2015; Flickinger et al., 2016).

Additionally, studies on the retention of IT employees generally cover private-sector organisations. In this regard, this study merely focuses on public institutions in Türkiye. It was revealed that 86% of public IT professionals intended to quit their jobs in Türkiye (Erturk, 2014). This percentage is noticeably high and requires a better understanding of the reasons behind the high turnover intention rates of public IT professionals in Türkiye. The research framework of this study covers *all public institutions* with large-scale IT departments, accounting for thirty-seven public organisations in Türkiye. Overall, this study aims to integrate significant theories in a moderated mediation model that advances the role of POS, LMX and PE to lessen the turnover intentions of IT professionals in the public sector. In this regard, we first provide an overview of significant social exchange theories. Afterwards, we draw out some relevant distinctions between the related constructs.

2. Literature Review

2.1. Turnover Intensions

Although *turnover intention* is not a new concept in the literature, it remains popular. This is because the turnover intention is an immediate antecedent and a good predictor of actual turnover (Hom & Griffeth, 1991; Peters et al., 1981; Tett & Meyer, 1993). Real turnover matters for organisations since its results of it can cause several financial and social costs for organisations, such as (a) disruption of organisational business processes, (b) loss of organisational memory, (c) costs of recruiting, training and developing new employees,

(d) possibility of the endangerment of trade secrets, (e) damaging corporate image, (f) increasing workload on other employees, (g) increasing emotional stress, and (h) decreasing motivation among organisational members (Torun, 2016).

Rusbult et al. (1988) defined the concept of turnover as destructive and conscious actions such as leaving an organisation by quitting or transferring. Mobley (1982) defines turnover intention as the employee's subjective tendency that he/she will leave the organisation within a short period. According to the definition made by Tett and Meyer (1993), turnover intention is a cognitive process in which an employee consciously and purposefully desires to leave the organisation. Turnover intention constitutes the last stage of the actual turnover process. At the earlier stages of this process, employees start thinking about the possibility of leaving their jobs and examining alternative job opportunities. The reasons for turnover intentions may vary among employees, such as having poor working conditions, poor compensation, lack of supervisor support, lack of organisational support, lack of career opportunities, and lack of justice (Ngo-Henha, 2017). Thus, measuring the turnover intentions of employees to improve the factors affecting it is essential to develop retention strategies.

2.2. Management of IT Professionals in the Turkish Public Sector

An associate's, bachelor's, master's, or doctoral degree in IT fields, such as computer engineering, software engineering, and electronic engineering, may be the most common requirement for becoming an IT professional. Becoming an IT professional is possible by graduating from IT-related fields such as maths, physics, statistics, etc. Apart from these, some individuals can develop expertise in IT by gaining experience and receiving worldwide acceptable IT certificates without having a degree. Within the scope of this study, IT managers, IT specialists, engineers, software programmers, business analysts, statisticians, mathematicians, and IT technicians employed in IT departments of public institutions were accepted as public IT professionals.

IT professionals are also knowledge workers. Drucker (1994) defines knowledge workers as those who have theoretical and analytical knowledge and use their brain power rather than their muscles. Ozer, Ozmen and Saatcioglu (as cited in Gumusluoglu & Karakitapoglu-Aygun, 2010) describe knowledge workers as people who have high education in specific fields, have technological literacy, constantly improve their skills and abilities, and take the initiative while performing their duties. Knowledge workers demand more temporal and geographical flexibility than other workers (Albertsen et al., 2010). Moreover, the quality of employee and organisation relationships is considered significant for knowledge workers (Mobley, 1982). According to a study conducted in 21 European Countries with 14,096 knowledge workers, knowledge workers consider non-financial characteristics of the job, such as self-growth and self-actualisation, much more than financial rewards. Career development opportunities, flexible working conditions, managerial support, and team collaboration emerge as central considerations of knowledge workers regarding job satisfaction (Vinas-Bardolet et al., 2020).

The demand for highly skilled IT employees is substantially rising in the public IT sector of Türkiye (Calisir et al., 2011). This is because many public services are provided through information technologies, including e-government initiatives, increasing networking usage, cyber security and database applications, big data and artificial intelligence applications (Erturk, 2014).

Overall, IT professionals in the Turkish public sector have employment protection, can provide financial support to their families for life and have relatively good socio-economic status. Apart from that, government employees in Türkiye can have permanent contracts for a maximum of two years. Therefore, civil servants in Türkiye have "jobs for life" as employment protection. Additionally, the public IT sector in Türkiye has a male-dominated structure (Metin, 2020). Even though it has changed significantly during the last decade, men are still expected to be breadwinners by financially supporting the family in Türkiye.

Even though public IT professionals have relatively good living standards compared to the other career groups in Türkiye, 86% of IT professionals intended to leave (Erturk, 2014). Public IT professionals' high turnover intentions lead to significant problems for Turkish public organisations. What makes this even more problematic is the common assumption among public managers regarding the source of high turnover rates. According to public managers, IT professionals change their jobs frequently due to better employment opportunities in terms of earnings (Metin, 2020). Although this assumption might be partially true, public managers desire to avoid their responsibilities for lessening public IT employee turnover rates by hiding behind this assumption. There is no performance-based wage levelling in the Turkish public sector. Thus, public managers cannot provide any monetary rewards for outperforming employees. Nevertheless, as mentioned in the previous paragraphs, economic exchanges do not directly cause job satisfaction for IT professionals. Social exchanges between public IT professionals and their managers significantly influence employee turnover intentions.

The self-actualisation needs of IT professionals and knowledge workers are among the most significant job satisfaction factors (Tampoe, 1993). Furthermore, the quality of their relationship with their leaders and their organisation is another important factor influencing the turnover intention of public IT employees in Türkiye (Erturk, 2014). A study conducted by Metin (2020) in the Turkish public IT sector supports this view. The results of the study indicate that factors such as "to be able to use personal knowledge and experience more" and "to have better career advancement opportunities" are much more critical than "monetary rewards" for public IT employees. Therefore, IT professionals who do not receive the social support they expect from their organisations and/or managers, such as (a) feeling valued and appreciated, (b) acting with autonomy and initiative, (c) participating in training and development activities to enhance their skills, can easily have the intention to quit their current job.

2.3. Social Exchange Theory

This study discusses the conceptual framework of turnover intentions and its antecedents through social exchange theory. The reason for the preference of social exchange theory is that it is one of the most comprehensive theoretical concepts to explain intangible dimensions of employee relations, such as reciprocity, collective action, legitimacy, job satisfaction, organisational cooperation, organisational support, and supervisor support (Arslan, 2016). Unlike economic exchanges, social exchanges between workers and employers generally include unwritten conditions and obligations. The parties assume they will establish a long-term, trust-based business relationship in social exchanges. In this relationship, the parties act with the expectation of receiving some future return for their voluntarily positive attitudes and behaviours (Blau, 1964). Therefore, individuals try to determine the quality and nature of a relationship according to the expected return they hope to obtain through the relationship in the future. Individuals will pursue a relationship if the rewards are expected to be greater than the costs. Otherwise, the relationship may be terminated or abandoned (Emerson, 1976).

Exchange relationships in the workplace demand repayment, in other words, reciprocal favour, shortly (Foa & Foa, 1974). Gouldner (1960) argued that individuals must reciprocate the blessings they receive. Greenberg (1968) extended this approach and claimed that receiving acceptance creates a psychological state of indebtedness. Employees who think they receive sufficient support from their organisations and managers try to respond to the turns made for them. These employees, thus, enter into a psychology of indebtedness towards the organisation and their managers by showing more effort in their work (Allen et al., 2003). Exchange relationships of employees between both organisations and leaders (supervisors) are referred to as perceived organisational support (POS) and leader-member exchange (LMX), respectively (Wayne et al., 1997).

Eisenberger, Huntington, Hutchison, and Sowa (1986) found evidence of employee commitment as repayment for the favour. The authors also confirmed that employee commitment lessens the intention to leave. On the other hand, if employees feel that support from their supervisor or organisation is not valued enough in return for their efforts towards the realisation of organisational goals and objectives, then their intention to leave increases (Dinc, 2015).

2.4. Psychological Empowerment

Psychological empowerment represents a motivational construct essential for employees to feel a sense of control in their work (Conger & Kanungo, 1988). Spreitzer (1995), who conducted preliminary studies on psychological empowerment, states that psychological empowerment is a motivational structure with four sub-elements: *meaning, self-determination, competence* and *impact*. *Meaning* claimed to trigger psychological empowerment is the level of appreciation of the task given to the individual. *Self-determination*, on the other hand, is defined as a sense of freedom about how individuals

carry out their work. It describes perceptions of individuals that they can determine factors such as the method, time and amount of effort they will use to perform work activities. *Competence* refers to individuals' belief in the knowledge, skills and abilities necessary to do a job. *Impact*, the last dimension of psychological empowerment, is the belief that employees influence strategic, administrative or operating outcomes at the workplace (Spreitzer, 2008).

Employees who think they are psychologically empowered take more active roles at work. Thus, psychological empowerment is significant for enhancing proactive behaviour at work (Wikhamn & Selart, 2019). Empowered employees do not wait for guidance from the environment by remaining passive; on the contrary, when they see a situation that needs action, they take the required action themselves or mobilise relevant employees to take action (Zhang & Bartol, 2010). Drucker (1988) indicates an increasing interest in organisations in psychological empowerment practices. According to the author, the main reason behind this interest is that organisations realise they can only be successful with the leadership and creativity of knowledge workers in today's highly competitive and constantly changing environments, such as the IT sector. In light of the arguments presented above, we hypothesise the following:

H1.a Perceived meaning associates negatively with turnover intentions.

H1.b Perceived self-determination associates negatively with turnover intentions.

H1.c Perceived competence associates negatively with turnover intentions.

H1.d Perceived impact associates negatively with turnover intentions.

2.5. Leader-Member Exchange

Wayne et al. (1997) argued that despite conceptual similarities between POS and LMX, these constructs have unique antecedents and consequences based on social exchange theory. Leader-member exchange (LMX) was introduced in the eighties as an alternative to existing leadership approaches. While many behavioural or cognitive-based leadership theories focus on employees' perceptions of managers' leadership styles, LMX focuses on the two-way reciprocal exchanges between followers and leaders regarding respect, trust, and mutual obligations (Wang et al., 2005). In traditional leadership theories, managers are assumed to adopt the same leadership style towards all team members. In the LMX approach, unlike the traditional approaches, each leader adopts a partly different leadership style to each follower according to their unique reciprocal social exchange. In each relationship, the emotional exchanges between the parties develop in other qualities and nature (Buengeler et al., 2021). Additionally, it is argued that empowering leaders in Eastern countries is more effective at influencing employee performance than in Western cultures (Lee et al., 2018) due to cultural differences.

Moreover, attitudes and behaviours displayed by leaders towards their employees affect the business relations between the parties. Some managers mainly take their

employees' opinions on issues that may affect the employees. They also provide feedback to their employees about corporate decisions and treat them with respect and courtesy. In return for all these positive approaches, good relationships are expected between this type of manager and their employees (Gumusoglu & Karakitapoglu-Aygun, 2010). The quality and nature of the social exchange between leader and member link leader behaviour to member response. The quality of this relationship influences member performance (Wang et al., 2005). Trust is strengthened between the parties. In addition, many organisational stressors are eliminated (Graen & Uhl-Bien, 1995).

In a study conducted by Allen et al. (2008), it was seen that IT specialists with high LMX exhibit higher performance because they receive more support from their leaders, and the turnover intentions of these employees decrease. Overall, this study hypothesises that.

H2 LMX has a significant negative impact on turnover intentions.

On the other hand, employees who have weak relationships with their superiors benefit less from organisational resources and have less knowledge about organisational processes. In addition, employees with low LMX have lower job satisfaction and higher turnover intention than employees with high LMX (Ozutku et al., 2008). In this regard, Eisenberger et al. (2016) argued that POS is strongly driven by effective leadership. Furthermore, employees consider their managers as kind of representatives of the organisation they are affiliated with to a certain level. Thus, we hypothesise the following;

H3 LMX is associated with POS.

2.6. Perceived Organisational Support

Eisenberger et al. (1986) defined the concept of POS as the feelings of employees that the organisation values their contributions and cares about their welfare. Additionally, the organisation carries out policies and actions that affect employees constructively and voluntarily. According to social exchange theory, employees who believe their organisation invests in them receive a signal that the organisation has initiated a social exchange. In return for the favour provided by the organisation, employees increase their efforts to achieve organisational goals and objectives (Allen et al., 2003; Rhoades & Eisenberger, 2002). In today's digitalised work-life, IT professionals rely on employment organisations; organisations depend on their skills and abilities concurrently. Therefore, the norm of reciprocity escalates the impact of POS on IT professionals (Hofaidhllaoui & Chhinzer, 2014). Hence, this study hypothesises that:

H4 POS has a significant negative impact on turnover intentions.

Moreover, individual needs and values hence motivation factors, differ from employee to employee due to various factors such as age, gender, marital status, employment type, and cultural background (Ersoy-Kart, 2011). For example, child benefits or additional parental maternity leave provided by an organisation cannot be expected to have the same

motivating effect on employees who are not planning to have any child and those who are planning to have a child. Likewise, while many businesses offer additional health insurance and retirement plans to their full-time employees, they do not offer such opportunities for their part-time employees (Eisenberger et al., 2016). Since the needs and, thus, motivational factors of each employee differ, then each employee will be more satisfied if his/her priority needs are met (Ersoy-Kart, 2011). Consequently, the impact of the same favours on POS differs for each employee.

Nezhina et al. (2021) also argued that the government's positive image and perceived prestige matter to public employees. These two factors directly affect the intention to leave public employees from government jobs. Furthermore, creating an environment where employees feel safe, confident, and assertive partly depends on organisations and leaders. Such an empowering environment also depends on employees' relationships with their leaders and the organisation. The empowered employees by their leaders or organisation are more likely to be creative, confident and put extra effort into their duties.

Thus, based on the above arguments, we hypothesise the following:

H5.a LMX is positively associated with perceived meaning.

H5.b LMX is positively associated with self-determination.

H5.c LMX is positively associated with perceived competence.

H5.d LMX is positively associated with perceived impact.

H6.a POS is positively associated with perceived meaning.

H6.b POS is positively associated with self-determination.

H6.c POS is positively associated with perceived competence.

H6.d POS is positively associated with perceived impact.

2.7. Mediating Roles of PE and POS

The term *statistical mediation*, or simply *mediation,* refers to an intervening (or middle) variable which intervenes between the independent variable (input) and the dependent variable (outcome). According to Baron and Kenny's (1986) approach, four conditions must be met to establish a mediation. The first step involves having a significant causal relationship between one independent variable and one dependent variable. Secondly, the independent variable must significantly predict the mediating variable. Thirdly, the mediating variable must dramatically predict the dependent variable. Lastly, the relationship between the dependent and the independent variable must be disappeared (full mediation) or reduced considerably (partial mediation) when including the mediating variable in this relationship.

A study conducted by Zhong, Wayne, and Liden (2015) demonstrated that POS plays a mediation role in the relationship between the interaction of human resource practices and

work engagement. The results also indicated that POS and organisational commitment could be increased in the case of good social exchanges between managers and employees (LMX). For permanent employees, high-quality LMX has a significant role in the relationship between job satisfaction and turnover intentions (Flickinger et al., 2016). Full-time employees also tend to develop long-term social exchanges with their organisations and leaders (Wayne et al., 1997).

This is particularly common in Turkish public institutions where all civil servants have permanent contracts. Individuals who start civil service in Türkiye are promoted from the "candidate civil servant" status to the "civil servant" status within a maximum of two years if they successfully pass the apprenticeship programmes. Accordingly, Turkish civil servants still have "jobs for life", as employment protection provided by public law. Meanwhile, civil servants are employed by governments, not by public managers. Therefore, POS is expected to be associated with higher intrinsic motivation for civil servants than LMX. Thus, POS is also likely to mediate between the relationship of LMX and turnover intention. In this regard, employees may also feel that they are not supported enough by their leaders. Nevertheless, if employees perceive satisfying organisational support, their intention to quit may not increase, even though the LMX is low. In light of the arguments presented above, we hypothesise the following:

H7 POS mediates the relationship between LMX and turnover intentions.

Empowered employees are more likely to have fewer turnover intentions, even in the case of a lack of LMX or POS. Zhang and Bartol (2010) argued that PE mediates the relationship between LMX and employee performance outcomes. Thus, taking into consideration the differentiated relations of POS, LMX and PE on turnover intentions, we hypothesise that;

H8 PE mediates the relationship between LMX and turnover intentions.

H9 PE mediates the relationship between POS and turnover intentions.

Lastly, we also argue that due to the male-dominated structure of the Turkish IT sector (Metin, 2020), gender may be a moderator effect on the relationship between research model variables. Overall, this study hypothesises the following:

H10.a Gender moderates the mediated relationship between LMX and TI via POS.

H10.b Gender moderates the mediated relationship between LMX and TI via PE.

As a result of the literature review, all the hypotheses developed within the scope of this study are transformed into the proposed research model demonstrated in Figure 1 below.

Figure: 1
Proposed Research Model
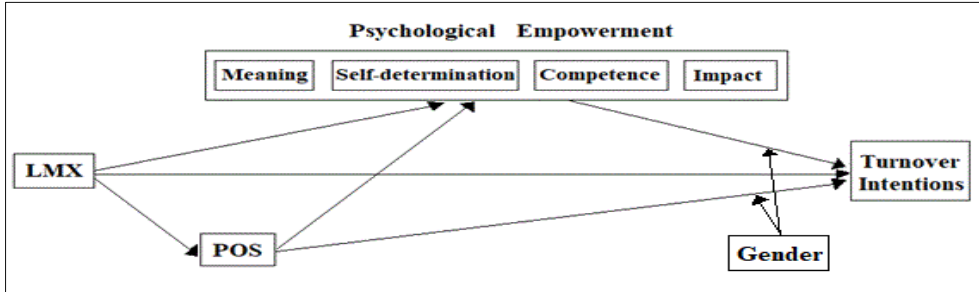
In light of the hypotheses, all the LMX, POS and PE variables affect the intention to leave. It has also been suggested that LMX affects both POS and PE. LMX and POS have together influenced PE as well. We also argue that POS plays a mediation role in the relationship between LMX and turnover intentions. Furthermore, PE plays mediation roles in the relationships of LMX and POS with turnover intentions. Lastly, gender moderates the mediated relationship between LMX and turnover intentions via POS and PE.

3. Methodology

3.1. Sample and Procedure

Before stepping up into the data collection process, a pilot study was conducted to ensure that public IT professionals quickly understood the scales in the questionnaire (Erturk, 2014). The web-based structured questionnaire contained all measurements described below and some demographics. The measures were initially developed in English and translated into Turkish through a back-translation approach. Within the research ethics framework, permissions were obtained from the researchers who translated the scales into Turkish. Additionally, a consent form was included at the beginning page of the web-based questionnaire, and the IT employees were asked to participate voluntarily. The consent form had a paragraph including the assurance of respondent confidentiality of her or his answers.

The research framework comprises all public institutions with large-scale informatics units in Türkiye. A web-based questionnaire was administered to 37 public institutions to test our research hypotheses. Due to personal data privacy, reaching the e-mail addresses of 3,055 IT professionals employed in these institutions would be considerably complicated. Thus, data collection processes were launched by sending information e-mails to the head of IT departments or general directors of IT (if there was any). The purpose and scope of the research were explained within the information e-mail. The managers were asked to participate in the study and forward the electronic questionnaire to their IT employees. A total number of 361 electronic questionnaires were returned from 31 out of 37 public institutions. Institutions' mean and median response rates were 11.8% and 10.3%,

respectively (Please see Appendix A). The mean and median response rate of public IT
professionals on a position basis was 11.8% and 12,5%, respectively (Please see Table 1).

Table: 1
Sample Representation Rates by Job Title

Job Title	Total Number of IT Professionals	Number of Responses	Response Rates
Engineer	683	66	9.7
Contracted IT Specialist	581	71	12.2
Programmer	418	58	13.9
Other (Computer Operator etc.)	386	28	7.3
Specialist	334	32	9.6
Analyser	216	20	9.3
Technician	142	26	18.3
Head of Group. Manager, Chief	113	34	20.9
Assistant Specialist	74	10	13.5
Head of Department / Senior Manager	48	6	12.5
Statistician / Mathematician	36	10	27.7
Total	*3,055*	*361*	*11.8*

The two-tailed independent samples *t*-test was applied to compare the means of
separate groups to determine whether there were any significant differences in the
demographics and the measurement variables. No significant differences were found in the
t-tests. Additionally, analysis of variance (ANOVA) was applied to compare the statistical
difference between the mean differences of study variables and demographics of
participants, including age group and income group etc. Results indicated no significant
difference between participants' job titles, age groups, income groups, research variables,
and demographics.

3.2. Measures

Turnover Intention Scale. The "turnover intention scale", developed by Rosin and
Korabik in 1995, was used to determine the turnover intentions of public IT professionals.
The scale was adapted to Turkish by Tanriover in 2005 (Torun, 2016). The scale consists of
four statements. One of the statements is that "I am actively searching for another job right
now" The Cronbach's alpha value of the original scale was 0.82. Tanriover calculated
Cronbach's alpha value of the scale as 0.930. The scale responded on a 5-point scale with
anchors of 1: Strongly Disagree and 5: Strongly Agree.

Psychological Empowerment Scale. The scale Spreitzer (1995) developed measures
public IT professionals' psychological empowerment. The Cronbach's alpha value of the
scale developed by Spreitzer was calculated as 0.74. The scale responded on a 5-point scale
with anchors of 1: Strongly Disagree and 5: Strongly Agree (Hancer, 2001). The scale has
three statements in each of the four sub-dimensions. Thus, it consists of 12 items. Sample
items for the psychological empowerment scale include "The work I do is meaningful to
me" (meaning), "I am self-assured about my capabilities to perform my work activities."
(competence), "I have significant influence over what happens in my department" (impact),
"I have significant autonomy in determining how I do my job" (self-determination). The
Turkish scale adaptation was conducted by Tolay et al. (2012). The authors performed the
validity and reliability tests, and Cronbach's alpha value of the scale was calculated as 0.860.

Perceived Organisational Support Scale. The Survey for Perceived Organisational Support (SPOS) scale was developed by Eisenberger et al. (1986). The SPOS was developed to measure employee perception regarding the amount of support they believe to receive from their organisation. The scale consists of 36 items. The scale responded on a 5-point scale with anchors of 1: Strongly Disagree and 5: Strongly Agree. The scale was simplified by Stassen and Ursel in 2009 due to a large number of questions. The number of items was reduced to 10 questions within a one-dimensional structure. The Cronbach's alpha value of the modified scale was measured as 0.93. Turunc and Celik (2010) made the Turkish adaptation of this scale. As a result of the transformation the authors drove, Cronbach's alpha value of the scale was determined as 0.88.

Leader-Member Exchange Scale. The leader-member exchange scale (LMX-7) was developed by Scandura and Graen in 1984. The scale was developed to measure the quality of interaction between leaders and members within an organisation. LMX-7 consists of one dimension and seven items. The Cronbach's alpha value of the original scale was 0.86. Erturk and Vurgun (2014) calculated Cronbach's alpha value of the scale as 0.92. The scale responded on a 5-point scale with anchors of 1: Strongly Disagree and 5: Strongly Agree.

4. Results

4.1. Preliminary Analysis

Descriptive statistics, including means, standard deviations, alpha reliabilities, and inter-correlations among the established constructs, appear in Table 2. Before estimating the confirmatory measurement, several assumptions of structural equation modelling need to be checked, such as normality, linearity, homoscedasticity and absence of multicollinearity. *Normality* refers to the normal distribution of error terms, *linearity*, that is, the relationships between dependent and independent variables are linear; *homoscedasticity* refers to equal variances between the groups being compared, and *absence of multicollinearity* which means independent variables in the structural equation model are not correlated. Violating these assumptions may result in inconsistent and unreliable results from the tested models (Atik, 2019).

The scales were usually distributed. Besides that, Cook's distance statistic was calculated to ensure no clear cases were biasing the proposed research model. Any observation for which the Cook's distance is over 1, or three times higher than the average Cook's distance, requires outlier investigation (Pallant, 2005; as cited in Sigirci, 2010). There was no record with a Cook's distance value above 0.10, meaning there were no outliers in the data set. Moreover, to examine the multicollinearity problem, the variance inflation factor (VIF) value should be less than 5.0. (Buyukozturk, 2007; as cited in Sigirci, 2010). On the other hand, Wooldridge (2013; cited in Atik, 2019) stated that the VIF value should be less than 10.0 to ensure no multicollinearity. In this study, VIF values ranged from 1.58 to 2.21, considerably less than the threshold values of 5.0 and 10.0.

Apart from these, the standard method variance (CMV) is a further critical biased reason for the measurement error of scales. CMV is "variance attributable to the measurement method rather than the constructs the measures represent" (Podsakoff et al., 2003: 879). CMV may mainly be a problematic concern in studies in which (a) the cross-sectional data is collected through (b) self-reporting surveys, (c) both the dependent and independent variables are derived from the same respondent, and (d) in the same location (Chang et al., 2010). The un-rotated principal components factor analysis, main components analysis with varimax rotation, and principal axis analysis with varimax rotation all revealed that each of the scales was loaded highly on one factor, which indicated that all the scales were one-dimensional (Erturk, 2014). Meanwhile, components with an eigenvalue of less than one were eliminated, as suggested by Chatfield and Collins (1980), to deal with fewer components. When the percentages of the total variances of the seven extracted components are accumulated, 73.5% of the total variance is explained. Additionally, the first (most significant) factor did not account for most covariance among the variables. Therefore, no general factor indicated the absence of standard method variance.

4.2. Exploratory Factor Analysis

After it was determined that the scales had a normal distribution, exploratory factor analysis (EFA) (using SPSS 23) was conducted before applying confirmatory factor analysis (CFA) and structural equation modelling methods (using AMOS 23), respectively. All seven variables were entered into exploratory factor analyses, including turnover intentions, PE-meaning, PE-competence, PF-self-determination, PE-impact, POS, and LMX. Cronbach's alpha reliabilities of the scales used in the proposed research model vary from 0.87 to 0.95. All the correlations between the constructs were statistically significant, apart from the relationship between turnover intentions and PE-competence ($p < 0.01$).

Factor loading scores higher than the cut-off value of 0.40 indicate that the particular factor well explains the item. Otherwise, the items lower than the chosen cut are considered "not good" items suggested to be removed from the scale. Moreover, no item should be loaded with more than one factor with a difference of less than 0.10 (Matsunaga, 2010). Therefore, based on the results from the initial EFA, we first continued removing items with low factor loadings, less than 0.40 score. In this regard, the ninth item of the perceived organisational support scale, "If my job were eliminated, the organisation would prefer to lay me off rather than transfer me to a new job", had a 0.16 Cronbach's alpha value. Thus, the item was removed from the scale. Job elimination cases are considered rare in public institutions in Türkiye. Moreover, the first item of LMX, "*I usually know where I stand with my supervisor*", was also excluded from the scale since the item had 0.37 Cronbach's alpha and loaded on two factors with relative values. The second result of EFA indicated that there was no item with a factor loading of less than 0.40 Cronbach's alpha value. Additionally, no item was loaded on more than one factor with a difference of less than 0.10. Thus, the original items of the scale, except LMX-1 and POS-9, were preserved.

Table: 2
Descriptive Statistics, Reliabilities, and Correlations

Variables	Mean	SD	PE-M	PE-C	PE-S	PE-I	LMX	POS	TI
PE-M	4.27	0.92	.95[a]						
PE-C	4.40	0.78	.58**	.91[a]					
PE-S	3.54	1.10	.44**	.37**	.87[a]				
PE-I	2.95	1.21	.34**	.24**	.64**	.95[a]			
LMX	3.17	1.08	.26**	.23**	.48**	.42**	.93[a]		
POS	2.81	1.01	.25**	.11*	.41**	.31**	.69**	.93[a]	
TI	2.82	1.22	-.12*	.01	-.35**	-.23**	-.46**	-.59**	.91[a]
Age group	3.86	1.67	.01	-.08	.05	.09	.04	-.01	-.11*
Service period	2.62	1.43	-.08	-.08	-.00	.05	.01	-.05	-.06
Wage level	3.27	1.71	.05	.14**	.11*	.08	.08	.12*	-.05
Gender	1.76	0.43	-.01	-.03	.04	.15**	.01	.03	.06
Education level	2.14	0.63	-.03	.10	.07	.04	.05	.02	.09

Note. n = 361. PE-M = psychological empowerment-meaning; PE-C = psychological empowerment-competence; PE-S = psychological empowerment-self-determination; PE-I = psychological empowerment-impact; LMX = leader-member exchange; POS = perceived organisational support; TI = turnover intentions; PE-M, PE-C, PE-S, PE-I, LMX, POS and TI variables were coded 1 = strongly disagree to 5 = strongly agree. Age was coded 1 = 20-24, 2 = 25-30, 3 = 31-35, 4 = 36-40, 5 = 41-45, 6 = 46-50, 7 = 51-55, 8 = 56+. The service period was coded 1 = 0-5 years, 2 = 6-10 years, 3 = 11-15 years, 4 = 16-20 years, and 5 = 21+ years. Income level (monthly in Turkish Liras) was coded 1 = 3-4.5k, 2 = 4.5-6k, 3 = 6-7.5k, 4 = 7.5-9k, 5 = 9-10.5k, 6 = 10.5-12k, 7 = 12k +. Gender was coded 1 = female and 2 = male. Education level was coded as 1 = associate degree, 2 = bachelor's degree, 3 = master's or equivalent, 4 = doctorate or equivalent.
SD; standard deviation.
a Cronbach's alpha reliabilities.
* p < .05; ** p < .01. Two tailed.

4.3. Confirmatory Factor Analysis

A further phase in which the validity tests of the scales are performed is the confirmatory factor analysis (CFA) (Please see Table 3). We conducted two separate CFAs to examine whether the items captured distinct constructs using AMOS 23.0. After assessing the first model ($M_{initial}$) and removing the non-significant paths between the variables, the final model (M_{final}) was constructed. The second CFA results indicated that the final model (M_{final}) had a better fit with the data ($\chi2 = 797.48$, $df = 370$, $\chi2 / df = 2.15$, CFI = 0.96, RMSEA = 0.06, SRMR = 0.05, $p < .001$) compared to the first model ($M_{initial}$).

Table: 3
CFA Model Fit Results

	$\chi2$	df	$\chi2 / df$	CFI	SRMR	RMSEA
$M_{initial}$	1114.18	413	2,69	.93	.06	.07
M_{final}	797.48**	370	2.16	.96	.05	.06
$M_{mediation\ POS}$	238.95**	119	2.01	.98	.04	.06
$M_{mediation\ PE}$	1080.89**	376	2.88	.93	.06	.07
*Thresholds**	--	--	*2 < χ2 / sd χ ≤ 3*	*.95 ≤ CFI ≤ 1*	*< .08*	*< = .06*

Note. n = 361. χ2 = Chi-square; df = degree of freedom; CFI = comparative fit index; SRMR = the Standardized Root Mean Squared Residual; RMSEA = The Root Mean Square Error of Approximation
* Hu and Bentler (1999).
** p < .01.

The results provided support for the discriminant validity of our measures. Furthermore, all indicators had statistically significant factor loadings (p < .01), suggesting convergent validity (Wang et al., 2016). Additionally, all indicators had perfect model fit results according to the threshold values (Hu & Bentler, 1999). The model fit indices of $M_{mediation\ PE}$ is also acceptable (RMSEA = 0.072) (Kim et al., 2016).

4.4. General Findings Regarding Public IT Sector in Türkiye

Several characteristics of the whole population of the Turkish IT sector were explored at the earlier stages of this study. For instance, the number of public organisations with large-scale IT departments was found as a total of 37 organisations. Additionally, the total number of public IT professionals was identified as 3,055 employees. Moreover, the distribution of public IT professionals by title was also obtained. Responses were received from 31 out of 37 public institutions with large-scale IT departments in Türkiye. The findings indicate that response rates from several subgroups, such as organisation size (11.6%) and job title (11.8%), proportionally reflect specified characteristics in the Turkish Public IT sector population.

Some of the findings regarding the demographic structure of the Turkish public IT sector can be listed as follows; (a) while the ratio of women in the sector is 24%, the ratio of men is 76%, (b) 73% of the IT employees are under the age of 40, (c) while 33% of the IT employees have a computer engineering degree, 12% of them have electronics and/or electronics engineering degree, % 12 of them have computer programming associate degree and 30% of the employees have not received a bachelor degree in the field of IT. Meanwhile, while 40.7 % of public IT professionals are considering leaving their current jobs, 6.4% are undecided, and 52.9% prefer to continue their careers.

Additionally, the figures indicate that the average monthly wages of IT professionals are considerably close to each other in the public and private sectors in Türkiye. The public IT employees' average monthly net income was 7,550 TL (1,100 $) in July 2020. This figure is consistent with the average monthly *gross wage* of 10,160 TL (1,280 $) for IT employees in all sectors announced by the Turkish Statistical Institute in Annual Industry and Service Statistics (Turkish Statistical Insitute, 2020). Meanwhile, although 63% of the public IT employees earn below the determined average wage of 7,550 TL (1,100 $), only 8% earn 12,000 TL (2,200 $) monthly. These data may require questioning the fairness of wage distribution among public IT professionals in Türkiye.

Moreover, according to Table 2, *employee age* was the only demographic variable with a significant relationship ($r^2 = -.11$, $p < .05$) with turnover intentions. Due to the negative relationship between these two variables, the turnover intentions of older IT professionals decrease. Furthermore, *wage level* was found to be positively related to PE-competence ($r^2 = .14$, $p < .01$), PE-self-determination ($r^2 = .11$, $p < .05$) and POS ($r^2 = .12$, $p < .05$). Apart from that, a significant relationship between *gender* and PE-impact ($r^2 = -.15$, $p < .01$) was also revealed. Male IT professionals have higher PE-impact levels compared to female IT professionals. Lastly, *employees' education level and service period* had no relationship with the research variables.

It is noteworthy that public IT employees with 11-15 years of service and higher levels of education earn more. However, this group has low POS and the highest intention to leave. For instance, the 12,000TL (2,200$) and above income group (per month) has the

highest intent to leave a value of 3.2 (out of 5) among all income groups. Apart from these, POS value drops to 2.4 among the IT professionals with 11-15 years of service, reaching the bottom level. About this, the turnover intention of these groups peaks at 3.4, the highest level among all age groups. Furthermore, the influence of the employees in the organisation is expected to increase over the years. Nevertheless, one of the remarkable findings about POS is that the group with the highest *PE-impact* value is those with 6-10 years of service.

4.5. Direct Effect Analysis

According to the results of direct effect analysis, it was determined that all the relations were significant at the 0.01 level, except the relations between PE-meaning and PE-impact and turnover intentions. Meanwhile, the relationship between POS and PE-competence was significant at 0.05 (Please see Table 4 for further details).

Table: 4
Standardised Regression Coefficients of Hypothetical Relationships

Hypothesis	Hypothesised Path			β	SD	P	Result
H1.a	PE-M	→	TI	-.11	.07	.07	Rejected
H1.b	PE-S	→	TI	-.46**	.09	***	Supported
H1.c	PE-C	→	TI	.27**	.10	***	Rejected
H1.d	PE-I	→	TI	.05	.06	.48	Rejected
H2	LMX	→	TI	-.49**	.06	***	Supported
H3	LMX	→	POS	.73**	.08	***	Supported
H4	POS	→	TI	-.62**	.08	***	Supported
H5.a	LMX	→	PE-M	.31**	.08	***	Supported
H5.b	LMX	→	PE-C	.26**	.04	***	Supported
H5.c	LMX	→	PE-S	.55**	.05	***	Supported
H5.d	LMX	→	PE-I	.48**	.06	***	Supported
H6.a	POS	→	PE-M	.27**	.06	***	Supported
H6.b	POS	→	PE-C	.13*	.05	.02	Supported
H6.c	POS	→	PE-S	.46**	.07	***	Supported
H6.d	POS	→	PE-I	.35**	.08	***	Supported

Note. PE-M = psychological empowerment-meaning; PE-S = psychological empowerment-self-determination; PE-C = psychological empowerment-competence; PE-I = psychological empowerment-impact; LMX = leader-member exchange; POS = perceived organisational support; TI = turnover intentions; SD; standard deviation.
* p < .05; ** p < .001; Two tailed.

Hypothesis 1a, 1b, 1c, and 1d proposed that PE is associated negatively with turnover intentions. Nevertheless, we found that PE-meaning (β = -.13, *p* > .05) and PE-impact (β = .16, *p* > .05) were not significantly related to turnover intentions. Thus, both H1a and H1d hypotheses were rejected. On the other hand, as shown in Table 4, PM-self-determination positively related to turnover intentions (β = .46, *p* < .001). Hence, H1b was supported. Finally, even though PE-competence term was significantly associated with turnover intentions (β = .27, *p* < .001), Hypothesis 1.c was not supported. This was because perceived competence associates positively with turnover intentions rather than negatively, as it was opposed in Hypothesis 1.c. In other words, PE-competence increases the turnover intentions of public IT professionals rather than lowering it, as suggested by several researchers (Asarkaya, 2015; Conger & Kanungo, 1988; Erdem & Deniz, 2016; Erturk, 2014; Erturk & Vurgun, 2015; Eisenberger et al., 2016; Torun, 2016).

Hypothesis 2 predicted that LMX was negatively and significantly related to turnover intentions. The results demonstrated a negative and significant impact of LMX on turnover intentions in line with the H2 (β = -.49, p < .001). Thus, H2 was supported. This result indicates that if the leader-member exchanges of public IT professionals increase, there would be a significant decrease in their intention to leave. LMX was also positively and strongly associated with POS (β = .73, p < .001), supporting Hypothesis 3. Meanwhile, POS showed the highest association with turnover intentions compared to other variables (β = -.62, p < .001). This result revealed that POS significantly reduces the intention to leave public IT professionals. H4 hence was supported.

Hypothesis 5 suggested that LMX is directly and positively related to the psychological empowerment of public IT professionals. The findings indicated that LMX is positively associated with PE-meaning (β = .31, p < .001), PE-competence (β = .26, p < .001), PE-self-determination (β = .55, p < .001), and PE-impact (β = .48, p < .001). It was noteworthy that the direct positive effects of LMX on both PE-self-determination and PE-impact were nearly twice as high as its impact on both PE-meaning and PE-competence. Overall, H5a, H5b, H5c, and H5d were all supported.

Hypothesis 6 states that POS is negatively associated with the psychological empowerment of public IT professionals. The results presented in Table 4 indicate that POS had a positive association with PE-meaning (β = .27, p < .001), PE-competence (β = .13, p < .05), PE-self-determination (β = .46, p < .001), and PE-impact (β = .35, p < .001). H6a, H6b, H6c, and H6d were thus supported. Parenthetically, the findings regarding H5 and H6 demonstrated that the impact of LMX on PE is considerably higher than that of POS.

4.6. Indirect Effect Analysis

This study developed H7, H8 and H9 hypotheses to test the mediating effects of POS and PE variables on the relationship between LMX and turnover intentions. There are two main tests to ensure whether the mediation is statistically significant. These tests are the Sobel test and bootstrapping. The bootstrapping method is recommended to increase the reliability of indirect effects analysis (Preacher & Hayes, 2004). In this regard, the BC-bias-corrected bootstrapping method, which is the most recommended for mediation effect analysis with the structural equation modelling (SEM) framework, was applied in this study (Shrout & Bolger, 2002). An SEM program, AMOS-23, was used to perform the tests.

Baron and Kenny's (1986) four steps approach was applied to test the mediation role of POS between the relationship LMX and turnover intention. The initial step was completed by demonstrating that LMX was significantly related to TI (β = -.49, p < .001) in Hypothesis 2. The second mediation step was also taken by identifying that LMX was significantly related to POS (β = .73, p < .001) in Hypothesis 3. The third step was met in our testing of Hypothesis 4 that POS was significantly related to TI (β = -.62, p < .01). Since the first three steps were completed, we moved to the fourth step to test the mediation effect of POS. In the fourth step, the mediator variable POS was introduced to the model to examine whether

the relationship between LMX and TI was significantly reduced or disappeared. The mediation model of POS ($M_{mediation\ POS}$) fits the data well ($\chi2 = 238.95$, *df* = 119, $\chi2$ / *df* = 2.01, CFI = 0.98, RMSEA = 0.04, SRMR = 0.06, *p* < .001) (Please see Table 3). The results presented in Table 5 revealed that the relationship between LMX and TI disappeared (β = -.08, *p* > .05) when POS was entered into the $M_{mediation\ POS}$ model. These results indicated that POS fully mediated the relationship between LMX and turnover intentions with a significant indirect effect for (β = -.41, *p* < .001), thus supportive of Hypothesis 7.

Furthermore, testing the second mediation condition, PE added to the first mediation model, which was $M_{mediation\ POS}$. By adding PE to the $M_{mediation\ POS}$ model, finally, the $M_{mediation\ PE}$ model was developed. With $M_{mediation\ PE}$ model mediation effect of PE on the relationships of both LMX and TI and POS and TI were tested in line with Hypothesis 8 and Hypothesis 9, respectively. The $M_{mediation\ PE}$ model had significant chi-square statistics and acceptable model fit values ($\chi2 = 1080.89$, *df* = 376, $\chi2$ / *df* = 2.88, CFI = 0.93, RMSEA = 0.07, SRMR = 0.06, *p* < .001) (Please see Table 3). The results are demonstrated in Table 5 below.

Table: 5
Mediation Roles of POS and PE

Model	Hypothesis	Hypothesised Path	β	β	Indirect Effect	Mediation	Result
$M_{mediation\ POS}$	H7	LMX → POS → TI	-0,08		-0,41**	full	Supported
$M_{mediation\ PE}$	H8a	LMX → PE-M → TI	-0,08		-0,02	none	Rejected
$M_{mediation\ PE}$	H8b	LMX → PE-S → TI	-0,08		0,14*	partial	Supported
$M_{mediation\ PE}$	H8c	LMX → PE-C → TI	-0,08		-0,19*	partial	Supported
$M_{mediation\ PE}$	H8d	LMX → PE-I → TI	-0,08		0,04	none	Rejected
$M_{mediation\ PE}$	H9a	POS → PE-M → TI		-0,49**	-0,02	none	Rejected
$M_{mediation\ PE}$	H9b	POS → PE-S → TI		-0,49**	0,14	none	Rejected
$M_{mediation\ PE}$	H9c	POS → PE-C → TI		-0,49**	-0,19	none	Rejected
$M_{mediation\ PE}$	H9d	POS → PE-I → TI		-0,49**	0,04	none	Rejected

Note: Standardized indirect effect (mediated) coefficients quantify the hypothesised path from LMX to TI through POS (LMX → POS → TI), the mediator.
LMX → TI shows the direct effect of LMX on turnover intentions of public IT professionals in the $M_{mediation}$ POS model.
* p < .05; ** p < .01.

The results yielded that the effects of LMX on turnover intentions were eliminated when PE entered to $M_{mediation\ PE}$ model (β = -.08, *p* > .05). PE-self-determination (β = .14, *p* < .05) and PE-competence (β = -.19, *p* < .05) both had significant indirect effects on turnover intentions. As a result, PE-self-determination and PE-competence partially mediated the relationship between LMX and turnover intentions. H8b and H8c, thus, were supported. On the other hand, H8a and H8d were not supported since PE-meaning and PE-impact had no significant indirect effects on the turnover intentions of public IT professionals. Apart from these, the effect of POS on turnover intentions was slightly reduced but stayed significant (β = -.49, *p* < .01) when introducing PE into this relationship. Thus, none of the sub-dimensions of PE mediates the effect of POS on the turnover intentions of public IT professionals. Therefore, H9a, H9b, H9c, and H9d were all not supported.

Lastly, this research revealed that the public IT sector in Türkiye is male-dominated, with 76% male and 24% female employee ratios. Therefore, we conducted simple slopes analysis to determine whether the male-dominated structure of the sector had any moderator

effect of gender on the research model (Zhong et al., 2015). Hence, we tested H10.
Specifically, our results showed that the gender variable moderate merely the relationship
between POS and PE-meaning (Please see Table 6).

Table: 6
Moderating Role of Gender

Moderating Effect			β
POS_x_gender	→	PE-meaning	.12* (.06)
POS_x_gender	→	PE-competence	-.00 (.05)
POS_x_gender	→	PE-self determination	-.06 (.06)
POS_x_gender	→	PE-impact	.03 (.07)
LMX_x_gender	→	PE-meaning	-.09 (.06)
LMX_x_gender	→	PE-competence	.04 (.05)
LMX_x_gender	→	PE-self determination	-.02 (.06)
LMX_x_gender	→	PE-impact	.08 (.08)

Note: N = 361 individuals. Unstandardised estimates are reported, with standard errors in parentheses.
* p < .05.

As shown in Figure 2, the plot showed that the positive effect of POS on PE-meaning
was stronger for male IT professionals than female IT professionals.

Figure: 2
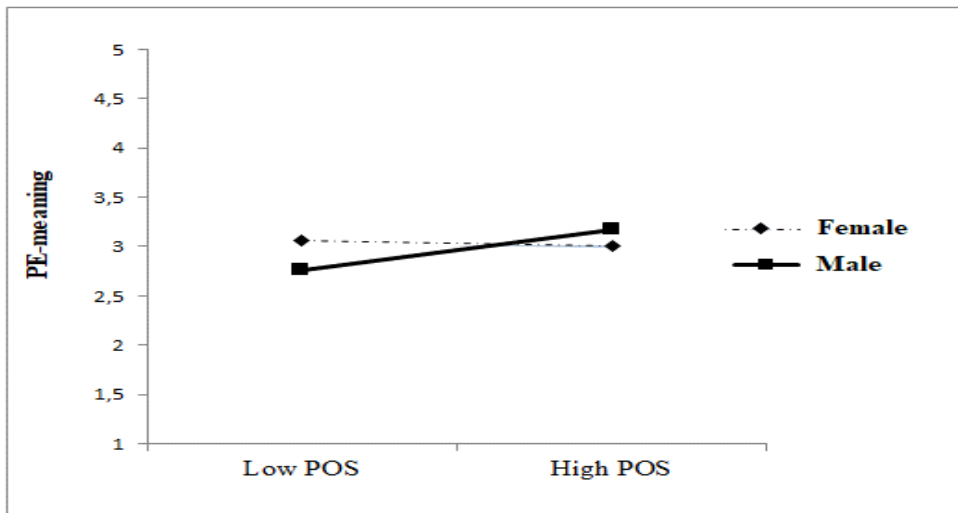**Employee Gender as a Moderator of the Relationship between POS and PE-meaning**

Figure 2 indicates that PE-meaning for male IT professionals significantly increases
between low POS levels (with a 2.75 mean value) and high POS levels (with a 3.18 mean
value). As a result, the last hypothesis, H10, was partially supported.

5. Discussion

The primary purpose of this research was to examine the roles of LMX, POS and PE on the turnover intentions of IT professionals in the public sector. The theoretical framework of this research (Please see, Figure 1) was established by drawing on social exchange theory since all of these constructs have unique antecedents and consequences based on this theory. More precisely, this study tested the potential mediation roles of POS and PE on the relationship between LMX and turnover intentions. In this regard, we proposed that public employees' turnover intentions are influenced not only by POS directly but also by LMX indirectly through POS. Moreover, we established a psychological mechanism behind these relationships, exploring that PE partially mediated the relationship between LMX and turnover intentions. Lastly, we argued that employee gender plays a moderation role in the relationship between POS, PE, and LMX and PE due to the male-dominated IT sector in Türkiye. The main findings, the practical implications and the limitations of this study are discussed as follows.

5.1. Main Findings and Theoretical Contributions

The findings mainly supported our proposed research model and made several contributions to social exchange research, more precisely for employee turnover and retention literature. First, the results indicated that POS played a pivotal role in significantly reducing the turnover intentions of public IT professionals. In addition, it was observed that POS also fully mediated the relationship between LMX and turnover intentions. The entire mediation role of POS indicated that if IT employees' perceived organisational support is satisfying, their intention to quit may remain the same, even though the LMX is low. These results expand our understanding of the antecedents and consequences of POS.

The second contribution of this study was the finding that PE-meaning and PE-impact both did not have any significant effect on turnover intentions, while several studies in psychological empowerment literature suggest otherwise (Asarkaya, 2015; Budak, 2016; Conger & Kanungo, 1988; Erdem & Deniz, 2016; Spreitzer, 1995; Spreitzer, 2008; Torun, 2016; Wikhamn & Selart, 2019). Furthermore, interestingly, contrary to the literature, we also found that with the increase in PE-competence, the intention to leave significantly increased rather than decreased. Additionally, the results of this research indicated that PE-self-determination had a negative and significant effect on the turnover intentions of IT professionals in the Turkish public sector.

Third, we also investigated the mediation role of PE between the relations of both POS-TI and LMX-TI. Zhang and Bartol (2010) argued that PE mediates the relationship between LMX and employee performance outcomes. In line with Zhang and Bartol (2010), we also found that PE-self-determination and PE-competence partially mediated the relationship between LMX and TI with one difference. PE-competence partially mediated the relationship between LMX and TI. However, the mediation effect of it increased employees' turnover intentions rather than decreasing it, contrary to what was suggested by

Zhang and Bartol (2010). Besides, we could not find any mediation effects of PE-meaning and PE-impact between LMX and TI. This was because PE-meaning and PE-impact both did not have any impact on TI. Thus, the possibility of playing a mediation role of these two variables was already not possible. Apart from that, our findings indicated that PE did not mediate the relationship between POS and TI.

Fourth, similar to previous research findings (Allen et al., 2008; Graen & Uhl-Bien, 1995; Gumusluoglu & Karakitapoglu-Aygun, 2010; Ozutku et al., 2008; Wang et al., 2005; Wayne et al., 1997) the findings of this study demonstrated a significant negative relationship between LMX and turnover intentions.

Fifth, according to the mean comparison tests, the only variable that differed by gender was the PE-impact variable. Males consider themselves more effective in decision-making processes in their units than females. This may also be due to the male-dominated structure of the Turkish public IT sector. Despite the male-dominated system of the sector, there was no gender differentiation in the rest of the research variables, such as intention to leave, POS and LMX.

Sixth, a further finding of this study was that employee gender moderates the relationship between POS and PE-meaning. This result indicated that male IT professionals find their responsibilities more significant at a high degree of POS than females.

Lastly, we also explored that while 40.7 % of public IT professionals considered leaving their current jobs, 6.4% were undecided, and 52.9% preferred to continue their current positions in Turkish public organisations. These findings indicated a significant difference from the previous study conducted in the Turkish public IT sector, in which turnover intentions of public IT professionals were revealed as around 86% (Erturk, 2014).

5.2. Practical Implications

From a practical perspective, the current study has brought significant theories in a moderated mediation model that has generated a more comprehensive understanding of the roles of POS, LMX and PE to lessen the turnover intentions of IT professionals. The findings revealed that POS significantly affected turnover intentions and mediated the relationship between LMX and turnover intentions. From this point of view, even though leader-member interactions of IT professionals are satisfying, their intention to leave may be high in the case of a need for POS. For these reasons, it can be claimed that POS plays the most critical role among all constructs in the research model in lowering the turnover intentions of IT professionals.

Our findings demonstrated the significance of high-quality relationships between IT managers and IT professionals to lessen the intention to leave the employees. Therefore, taking employees' opinions, providing feedback, delegating authority and treating them with respect and courtesy may strengthen trust between public IT managers and their employees. Apart from that, managers in the public sector may also consider using the POS scale to

evaluate the POS perceptions of their IT professionals to take precautions to control their employees' intention to leave at a certain level.

Indeed, culture was not considered directly in our research model. Hence it is impossible to draw firm conclusions about the influences of civilisation. Nevertheless, the pivotal direct and indirect role of POS on LMX, PE and turnover intentions of Turkish public IT professionals made us think about the critical part of POS from a cultural point of view. For instance, the cultural differences between Turkish and Western culture are a common view in Turkish society that the state is considered sacred. It is believed that rulers/leaders are temporary, and the state and its institutions are permanent. Thus, the legal personality of governmental institutions is considered above individuals. In this regard, for instance, the entire mediation role of POS between LMX and turnover intentions also indicated that although LMX is not satisfying for IT professionals, they may still prefer to continue their jobs if POS meets them. Furthermore, although civil servants may have better career development opportunities in the private sector, the number of civil servants who prefer working for their state even for lower wages is equal. Thus, POS that employees receive from their institutions, in other words, from the state, has a distinct meaning in motivation. In this regard, public organisations may seek to improve POS to influence the intention to leave the employees.

Furthermore, the results suggested that PE-meaning and PE-impact had no significant effect on the turnover intentions of public IT professionals. Nevertheless, it should be noted by public organisations that PE-meaning significantly increases at a high degree of POS for male employees. Therefore, PE-meaning may greatly influence male employees' turnover intentions at a high degree of POS. Moreover, the PE-impact value of IT professionals was measured as 2.95 (out of 5), the lowest value among all research variables. For this reason, more autonomy and responsibility should be delegated to public IT professionals to make them believe they have a beneficial influence on strategic, administrative or operating outcomes. In this regard, organisational structures of IT departments can be designed as more horizontal than vertical. As flat management structures, horizontal organisations focus on skill proficiency instead of managerial hierarchy. Project teams could be a more suitable environment for IT professionals to feel more empowered, mainly through horizontal (shared/distributed) leadership in project teams. In this contemporary approach, leadership authority is assigned to the best suitable employee in any given situation in a project (Yu et al., 2018).

On the other hand, PE-self-determination and PE-competence both partially mediated the relationship between LMX and turnover intentions. Therefore, delegating authority to increase employees' self-determination level is essential to decrease the turnover intentions of public IT professionals. Nonetheless, it should be noted by public IT managers that PE-competence positively mediated the relationship between LMX and turnover intentions. Thus, providing training and development programs for public IT professionals to improve their competencies lead to higher turnover intentions. Additionally, PE-competency eliminates the decreasing effect of LMX on turnover intention and indirectly increases the

turnover intentions of these employees. As a result, public managers should identify new approaches to achieve retention of public IT professionals while increasing their competencies.

The rapidly changing nature of the IT industry requires continuous improvement of IT employees' knowledge, skills, abilities, and capabilities through training and development. Otherwise, IT employees' knowledge, skills, abilities, and capacities may quickly become obsolete (Erturk & Vurgun, 2015). Nevertheless, self-empowered IT professionals do more than merely depend on organisational training and development activities for personal development. They often improve their personal development skills by finding challenges to learn something new. Indeed, an IT professional with a certain level of English and a computer with an internet connection can reach many online training and development platforms to improve herself/himself. Overall, self-empowered IT professionals, who mainly improve their competencies independently, may feel that their organisations and superiors need to support them more. Consequently, even though their competencies improve over time, they may think that the fundamental reason behind this improvement is their efforts rather than the organisational support. Thus, they may not feel to do reciprocal favour to their organisations.

Creating more supportive and personal organisational development programs to foster the retention of IT employees is vital for Turkish public sector organisations. Therefore, organisations shall also consider establishing corporate development programs tailored to each individual's potential and priorities to align them with organisational strategies. For instance, Mentoring and coaching programs can boost employee engagement to achieve organisational goals. Training and development activities can be organised using internal experts, mentors and/or coaches to be more cost-effective. Employees perceive these employee-oriented approaches as a sign of their organisation's support for their efforts.

Apart from that, it is noteworthy that public IT employees with 11-15 years of service had the lowest POS. This group's turnover intentions peaked at 3.4, the highest level among all age groups. In fact, at the late establishment stage of careers, between the age of 40-45, professionally mature individuals make great efforts to be promoted and/or realise themselves in business life. Nevertheless, the limited number of IT units and, thus, limited managerial positions in public organisations severely limit promotion opportunities for IT professionals in Türkiye. Therefore, most IT employees reach their career plateau within a few years. Meanwhile, a career plateau can be described as a career position with no higher vertical position. For instance, an assistant IT specialist becomes an IT specialist within a maximum of five years after successfully passing the required examinations, reaching her/his career plateau. On the other hand, Contracted IT specialists have no right to have any managerial position in the public sector of Türkiye. The rest of the IT professionals, such as engineers, programmers, analysers and technicians, have non or limited career paths. Within 15 years, a significant part of the employees observes that they will be unable to reach the career dreams they established at the beginning of their business life. For these reasons, public IT employees with 11-15 years of service may have the lowest POS and highest

turnover intentions. Hence, establishing clear paths for each IT position regarding career advancement can be an additional solution to increase POS and reduce turnover intentions.

Lastly, in contrast to the previous research (Aydın, 2009; Mastracci, 2009; Tansel, 1999; as cited in Erturk, 2014), which claimed considerable wage differences exist between private and public IT sectors in Türkiye, our findings showed that wage differential between the sectors was minor. According to our results, while the *net* average monthly wage of a public IT professional was around 1,100$ (7,550TL in July 2020), the *gross monthly salary* of an IT professional in the private sector was around 1,480$ (10,160TL) (Turkish Statistical Insitute, 2020). The low wage gaps between public and private IT sectors in Türkiye may result in less workforce transition between these sectors. Meanwhile, interestingly, the highest income group, which was *2,200$ and above* (per month), had the highest intention to leave the value of 3.2 among all income groups. This significant finding revealed that financial exchanges are not enough to lessen the turnover intentions of public IT professionals. Since IT professionals significantly consider non-financial characteristics of their jobs, such as self-growth and self-actualisation possibilities and their social exchanges in the organisation they are affiliated with.

5.3. Limitations and Future Directions

This study also has several limitations. First, more than the findings of this research are needed to demonstrate the causal effects of POS, LMX and PE on the turnover intentions of employees due to the cross-sectional research design of this study.

The second limitation of this study was that only 31 of the 37 public institutions in Türkiye that have large-scale IT units were included in the research framework. Therefore, public IT professionals employed in public universities, municipalities and other provincial organisations were out of the scope. Public organisations that do not have large-scale IT units were also out of the scope of this study. This study can also be extended to private sector organisations to compare public and private sectors.

Third, external macro parameters which affect the intention to quit, such as the unemployment rate, labour force participation rate, alternative job opportunities and the effectiveness of unions, were not considered due to the micro-level research design of this study. Future research could analyse these macro factors' effects on IT professionals' turnover intention by using time series analysis in longitudinal studies.

Fourth, the results indicated no significant direct relationship between *wage level* and *turnover intentions* of IT professionals. Nevertheless, wage level positively correlated with PE-competence, PE-self-determination and POS. Interestingly these three variables mediated the relationship between LMX and turnover intentions. Consequently, an increase in wage level may play a significant *indirect* role in reducing turnover intentions of IT professionals through increasing PE-competence, PE-self-determination, and POS. Future research, therefore, should address the moderating role of wage level for IT professionals.

Fifth, POS was identified as the most significant factor that directly and indirectly influences the turnover intentions of public IT professionals. Nevertheless, the mean value of POS was 2.81, the lowest value among all independent research variables. Hence, the reasons behind the low POS values of public IT professionals in Türkiye should also be investigated in future research.

References

Albertsen, K. et al. (2010), "Psychosocial determinants of work-to-family conflict among knowledge workers with boundaryless work", *Applied Psychology: Health and Well-Being*, 2(2), 160-181.

Allen, D. et al. (2003), "The role of perceived organizational support and supportive human resource practices in the turnover process", *Journal of Management*, 29(1), 99-118.

Allen, M. et al. (2008), "Factors impacting the perceived organizational support of IT employees", *Information & Management*, 45(8), 556-563.

Arslan, S. (2016), "HRM and Firm Performance: An Investigation of Turkish Mid-Size IT Firms", *Doctoral Dissertation*, Birmingham: University of Aston.

Asarkaya, Ç. (2015), "Psychological Empowerment: Antecedents, Correlates and Consequences", *Doctoral Dissertation*, İstanbul: Boğaziçi University.

Atik, M. (2019), "Düşük Maliyet Taşımacılık İş Modelini Benimseyen Havayolu Şirketlerinin Yan Gelir Uygulamalarının Finansal Performansları Üzerindeki Etkileri: Türk Sivil Havacılık Sektöründe Bir Uygulama", *İşletme Araştırmaları Dergisi*, 11(4), 2622-2635.

Baron, R.M. & D.A. Kenny (1986), "The moderator-mediator variable distinction in social psychological research: conceptual, strategic, and statistical considerations", *Journal of Personality and Social Psychology*, 51(6), 1173-1182.

Blau, P. (1964), *Exchange and Power in Social Life*, New York: Wiley.

Budak, G. (2016), *Yetkinliğe Dayalı İnsan Kaynakları Yönetimi*, Ankara: Nobel.

Buengeler, C. et al. (2021), "LMX Differentiation and Group Outcomes: A Framework and Review Drawing on Group Diversity Insights", *Journal of Management*, 47(1), 260-287.

Calisir, F. et al. (2011), "Factors affecting intention to quit among IT professionals in Turkey", *Personnel Review*, 40(4), 514-533.

Chang, S. et al. (2010), "From the Editors: Common method variance in international business research", *Journal of International Business Studies*, 41, 178-184.

Chatfield, C. & A.J. Collin (1980), *Introduction to Multivariate Analysis*, New York: Chapman and Hall in Association with Methuen, Inc.

Conger, J. & R. Kanungo (1988), "The Empowerment Process: Integrating Theory and Practice", *Academy of Management Review*, 13(3), 471-482.

Dinc, E. (2015), "Perceived Organizational Support as a Mediator of the Relationship between Effort-Reward Fairness, Affective Commitment, and Intention to Leave", *International Business Research*, 8(4), 259-269.

Drucker, P. (1988), "The coming of the new organization", *Harward Business Review*, 66, 45-53.

Drucker, P. (1994), "The age of social transformation", *The Atlantic Monthly*, (November), 24-29.

Eisenberger, R. et al. (1986), "Perceived organizational support", *Journal of Applied Psychology*, 71(3), 500-507.

Eisenberger, R. et al. (2016), "*Optimizing Perceived Organizational Support to Enhance Employee Engagement*", University of Houston: SHRM-SIOP Science of HR Series.

Emerson, R. (1976), "Social Exchange Theory", *Annual Review of Sociology*, 2, 335-362.

Erdem, H. & M. Deniz (2016), "Psikolojik (Algılanan) güçlendirmenin içsel ve dışsal iş doyumu üzerine etkisinde duygusal bağlılığın aracılık rolü: kamu çalışanları üzerinde bir yapısal eşitlik modeli uygulaması", *İş, Güç Endüstri İlişkileri ve İnsan Kaynakları Dergisi*, 18, 47-71.

Ersoy-Kart, M. (2011), *Çalışma Yaşamında Davranış ve Kişilik*, Ankara: University of Ankara: Distance Education Publications.

Erturk, A. (2014), "Influences of HR Practices, Social Exchange, and Trust on Turnover Intentions of Public IT Professionals", *Public Personnel Management*, 43(1), 140-175.

Erturk, A. & L. Vurgun (2015), "Retention of IT professionals: Examining the influence of empowerment, social exchange, and trust", *Journal of Business Research*, 68(1), 34-46.

Flickinger, et al. (2016), "The mediating role of leader-member exchange: a study of job satisfaction and turnover intentions in temporary work", *Human Resource Management Journal*, 26, 46-62.

Foa, U. & E. Foa (1974), *Societal Structures of the Mind*, Springfield: Charles C. Thomas.

Gouldner, A.W. (1960), "The Norm of Reciprocity: A Preliminary Statement", *American Sociological Review*, 25(2), 161-178.

Graen, G. & M. Uhl-Bien (1995), "Relationship-based approach to leadership: Development of leader-member exchange (LMX) theory of leadership over 25 years: Applying a multi-level multi-domain perspective", *Leadership Quarterly*, 6, 219-247.

Greenberg, D.B. (1968), "A Review", *Simulation*, 10(3), 112-112.

Gumusoglu, L. & Z. Karakitapoglu-Aygun (2010), "Bilgi Çalışanlarının Adalet ve Güçlendirme Algılarının Örgüte, Lidere ve İşe Bağlılık Üzerindeki Etkileri", *Turkish Journal of Psychology*, 25(66), 21-36.

Hancer, M. (2001), "An analysis of psychological empowerment and job satisfaction for restaurant employees", *Doctoral Dissertation*, The Ohio State University.

Hofaidhllaoui, M. & N. Chhinzer (2014), "The Relationship Between Satisfaction and Turnover Intentions for Knowledge Workers", *Engineering Management Journal*, 26(2), 3-9.

Hom, P. & R. Griffeth (1991), "Structural equations modeling test of a turnover theory: Cross-sectional and longitudinal analyses", *Journal of Applied Psychology*, 76(3), 350-366.

Hu, L. & P. Bentler (1999), "Cut-off criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives", *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1-55.

Kim, H. et al. (2016), "Confirmatory and Exploratory Factor Analysis for Validating the Phlegm Pattern Questionnaire for Healthy Subjects", *Evidence-Based Complementary and Alternative Medicine*, 2016, 2696019.

Lee, A. et al. (2018), *Developing Employees*, <https://hbr.org/2018/03/when-empowering-employees-works-and-when-it-doesnt>, 12.01.2021.

Matsunaga, M. (2010), "How to factor-analyze your data right: do's, don'ts, and how-to's", *International Journal of Psychological Research,* 3(1), 97-110.

Metin, F. (2020), "Kamuda Bilişim Uzmanı Personel Devir Hızı Sorunu ve Çözüm Önerileri: TÜİK Vaka Çalışması", *HÜ İİBF Dergisi*, 38(2), 243-266.

Mobley, W. (1982), *Employee Turnover: Causes, Consequences, and Control*, Reading, Mass: Addison-Wesley.

Nezhina, T. et al. (2021), "Public Personnel Job Satisfaction and Retention: The Effects of Perceived Image and Prestige of Government Jobs", *International Journal of Public Administration*, 44(16), 1435-1445.

Ngo-Henha, P. (2017), "A Review of Existing Turnover Intention Theories", *International Journal of Economics and Management Engineering*, 11(11), 2760-2767.

Ozutku, H. et al. (2008), "Lider-üye etkileşimi teorisi çerçevesinde, yönetici-ast etkileşimi ile örgütsel bağlılık boyutları ve iş performansı arasındaki ilişki: Ampirik bir inceleme", *Atatürk Üniversitesi İktisadi ve İdari Bilimler Dergisi*, 22(2), 193-210.

Peters, L. et al. (1981), "Predicting Turnover: A Comparison of Part-Time and Full-Time Employees", *Journal of Occupational Behaviour,* 2(2), 89-98.

Podsakoff, P. M. et al. (2003), "Common method biases in behavioral research: a critical review of the literature and recommended remedies", *The Journal of Applied Psychology*, 88(5), 879-903.

Preacher, K. & A. Hayes (2004), "SPSS and SAS procedures for estimating indirect effects in simple mediation models", *Behavior Research Methods, Instruments, & Computers*, 36, 717-731.

Rhoades, L. & R. Eisenberger (2002), "Perceived Organizational support: A review of the literature", *Journal of Applied Psychology*, 87(4), 698-714.

Rusbult, C. et al. (1988), "Impact of exchange variables on exit, voice, loyalty, and neglect: An integrative model of responses to declining job satisfaction", *Academy of Management Journal*, 31(3), 599-627.

Shrout, P.E. & N. Bolger (2002), "Mediation in experimental and nonexperimental studies: new procedures and recommendations", *Psychological Methods*, 7(4), 422-445.

Sigirci, A. (2010), "Evli Bireylerde Bağlanma Biçimleri ve Evliliğe Dair İnançların Evlilik Doyumu ile İlişkisinin İncelenmesi", *Doctoral Dissertation*, Malatya: İnönü University.

Spreitzer, G. (2008), "Taking Stock: A review of more than twenty years of research on empowerment at work", in: J. Barling et al. (eds.), *The SAGE Handbook of Organizational Behavior* (54-72), Los Angeles: SAGE.

Spreitzer, G.M. (1995), "Psychological Empowerment in the Workplace: Dimensions, Measurement, and Validation", *Academy of Management Journal,* 38(5), 1442-1465.

Tampoe, M. (1993), "Motivating Knowledge Workers", *Long Range Planning*, 26(3), 49-55.

Tett, R. & J. Meyer (1993), "Job Satisfaction, Organizational Commitment, Turnover Intention, and Turnover: Path Analyses Based on Meta-Analytic Findings", *Personnel Psychology*, 46(2), 259-293.

Tolay, E. et al. (2012), "Akademik Çalışma Ortamında Yapısal ve Psikolojik Güçlendirmenin Duygusal Bağlılık ve İş Doyumu Üzerindeki Etkileri", *Ege Academic Review*, 12(4), 449-465.

Torun, Y. (2016), "Personel Güçlendirme ve İşten Ayrılma Niyeti İlişkisinde Örgütsel Sinizmin Aracılık Rolü: Örgütsel Sinizm Ölçeği Geliştirmeye Yönelik Bir Araştırma", *Doctoral Dissertation*, İstanbul: Marmara University.

Turkish Statistical Insitute (2020), *Annual Industry and Service Statistics, 2019, Table-1 Basic Indicators by Economic Activity 2019*, <https://data.tuik.gov.tr/Bulten/Index?p=annual-industry-and-service-statistics-2019-33599&dil=2>, 08.10.2020.

Turunc, O. & M. Celik (2010), "Algılanan Örgütsel Desteğin Çalışanların İş-Aile, Aile-İş Çatışması, Örgütsel Özdeşleşme ve İşten Ayrılma Niyetine Etkisi: Savunma Sektöründe Bir Araştırma", *Atatürk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 14(1), 209-232.

Vinas-Bardolet, C. et al. (2020), "Knowledge Workers and Job Satisfaction: Evidence from Europe", *Journal of the Knowledge Economy*, 11, 256-280.

Wang, D. et al. (2016), "LMX and employee voice: A moderated mediation model of psychological empowerment and role clarity", *Personnel Review*, 45(3), 605-615.

Wang, H. et al. (2005), "Leader-Member Exchange as a Mediator of the Relationship between Transformational Leadership and Followers' Performance and Organizational Citizenship Behavior", *The Academy of Management Journal*, 48(3), 420-432.

Wayne, S. et al. (1997), "Perceived Organizational Support and Leader-Member Exchange: A Social Exchange Perspective", *The Academy of Management Journal*, 40(1), 82-111.

Wikhamn, W. & M. Selart (2019), "Empowerment and initiative: the mediating role of obligation", *Employee Relations*, 41(4), 662-677.

Yu, M. et al. (2018), "Empowerment: The key to horizontal leadership in projects", *International Journal of Project Management*, 36(7), 992-1006.

Zhang, X. & K.M. Bartol (2010), "Linking empowering leadership and employee creativity: the influence of psychological empowerment, intrinsic motivation, and creative process engagement", *The Academy of Management Journal*, 53(1), 107-128.

Zhong, L. et al. (2015), "Job engagement, perceived organizational support, high-performance human resource practices, and cultural value orientations: A cross-level investigation", *Journal of Organizational Behavior*, 37(6), 823-844.

Appendix: A
Distribution of Responses by Institutions and Institutional Representation Rates

	Name of Public Institution	Total Number of IT Professionals	Number of Responses	Response Rates
1	Social Security Agency, General Directorate of Service Delivery	400-450	44	10.4
2	Ministry of Treasury and Finance, Information Tech. General Dir.	150-200	30	17.1
3	Turkish Statistical Institute	100-149	28	22.4
4	Ministry of Trade	100-149	27	21.6
5	Ministry of Environment, Urbanization and Climate Change	100-149	25	20.0
6	Ministry of Justice, General Directorate of Information Processing	100-149	21	16.8
7	The Information and Communication Technologies Authority	100-149	18	14.4
8	Ministry of National Defence	100-149	16	12.8
9	Ministry of Interior	100-149	10	8.0
10	The Central Bank of the Republic of Türkiye	100-149	6	4.8
11	Ministry of Youth and Sports	75-99	20	16.0
12	Ministry of Family, Labour and Social Services	75-99	9	10.3
13	Ministry of Agriculture and Forestry	75-99	9	10.3
14	Ministry of Transport and Infrastructure	75-99	5	5.7
15	Ministry of Education	50-74	11	17.7
16	The Council of Higher Education	50-74	11	17.7
17	The Public Procurement Institution	50-74	10	16.1
18	Ministry of Energy and Natural Resources	50-74	9	14.5
19	Turkish Standards Institution	50-74	8	12.9
20	The Gendarmerie General Command	50-74	4	5.3
21	Ministry of Foreign Affairs	50-74	5	8.1
22	The General Directorate of State Hydraulic Works	50-74	5	8.1
23	Ministry of Culture and Tourism	50-74	5	8.1
24	The Student Selection and Placement Centre	50-74	5	8.1
25	Ministry of Industry and Technology	25-49	7	18.9
26	The General Directorate of Credits and Dormitories	25-49	4	10.8
27	Presidency for Turks Abroad and Related Communities	25-49	3	8.1
28	The Ombudsman Institution	25-49	2	5.4
29	Turkish Employment Agency	25-49	2	5.4
30	The Banking Regulation and Supervision Agency	25-49	1	2.7
31	The Energy Market Regulatory Authority	25-49	1	2.7
	Total		361	11.8

Metin, F. (2023), "Retention of Public IT Professionals: The Mediating Roles of Perceived Organisational Support and Psychological Empowerment", *Sosyoekonomi*, 31(57), 101-129.