



The effect of psychological contract on employees' organisational citizenship behaviour and the moderator role of five-factor personality traits in this effect

Çalışanların örgütsel vatandaşlık davranışı üzerinde psikolojik sözleşme algılarının etkisi ve bu etkide beş faktör kişilik özelliklerinin düzenleyici rolü

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Abstract

This study examines the relationship between psychological contract, organisational citizenship behaviours, and sub-dimensions of five-factor personality traits (extraversion, agreeableness, openness, conscientiousness, and neuroticism) of employees in the private sector. In addition, it investigated whether the sub-dimensions of personality traits have moderator roles in the relationship between psychological contract and organisational citizenship behaviours. In order to achieve this aim, the number one model proposed by Hayes (2013) was taken as a basis in establishing the model related to the relationships between three variables. Employees in the private sector (accounting, health and information sectors) who carry out their activities in Istanbul, Ankara, Izmir and Mersin constituted the research universe. The convenience sampling method was chosen while identifying the sample due to the Covid 19 pandemic that affected the world. The data used in the study were collected with three scales between January 1-31, 2021. The analysis of the model established in the study was performed with the SPSS package program and the R programming language. The result of the study indicated a significant relationship between the employees' perceptions of the psychological contract, organisational citizenship behaviour and the sub-dimensions of the five-factor personality traits. In addition, it has been determined that the sub-dimension of personality traits, "openness to development", has a moderator role in the relationship between psychological contract and organisational citizenship behaviour. It is also seen that the results are compatible with similar studies in the literature. It is expected that this research will contribute to organisational behaviour and psychology, while the findings can be used as input for other studies in the specified areas.

Keywords: Psychological Contract, Organizational Citizenship Behaviour, Personality Traits

Jel Codes: C1, C2, C10

Öz

Yapılan çalışmanın amacı, özel sektörde çalışanların psikolojik sözleşme algıları, örgütsel vatandaşlık davranışları ve beş faktör kişilik özelliklerinin alt boyutları (dışadönüklük, uyumluluk, öz disiplin, gelişime açıklık ve nörotiklik) arasındaki ilişkiyi ve psikolojik sözleşme algıları ile örgütsel vatandaşlık davranışları arasındaki ilişkide kişilik özelliklerinin alt boyutlarının düzenleyici rollerinin olup olmadığının incelenmesidir. Söz konusu amacı gerçekleştirmek amacıyla değişkenler arasındaki ilişkiler ile ilgili modelin kurulmasında Hayes (2013) tarafından önerilen bir numaralı model baz alınmıştır. Araştırma evrenini İstanbul, Ankara, İzmir ve Mersin illerinde faaliyetlerini yürütmekte olan özel işletmelerde (maliye, sağlık ve bilişim sektörleri) çalışanlar oluşturmuştur. Örneklemin oluşturulmasında tüm dünyayı etkisi altına alan Covid 19 pandemisi nedeniyle kolayda örneklem yöntemi seçilmiştir. Çalışmada kullanılan veriler, 01-31 Ocak 2021 tarihleri arasında üç adet ölçekten oluşan soru form ile toparlanmıştır. Çalışmada kurulan modelin analizi, SPSS paket programı ve R programlama dili ile yapılmıştır. Çalışmanın sonunda, çalışanların psikolojik sözleşme, örgütsel vatandaşlık davranışı algıları ile beş faktör kişilik özelliklerinin alt boyutları arasında anlamlı ilişki ve çalışan personel ile ilgili psikolojik sözleşme ve örgütsel vatandaşlık değişkenleri arasındaki ilişkide kişilik özelliklerinin alt boyutlarından gelişime açıklık alt boyutunun düzenleyici rolünün bulunduğu tespit edilmiştir. Elde edilen sonuçların literatürde yer alan benzer çalışmalar ile uyumlu olduğu tespit edilmiştir. Yapılan çalışmanın örgütsel davranış ile psikoloji alan yazınına katkı sağlayacağı ve elde edilen bulguların belirtilen alanlarda yapılacak diğer çalışmalarda girdi olarak kullanılabileceği değerlendirilmektedir.

Anahtar Kelimeler: Psikolojik Sözleşme, Örgütsel Vatandaşlık Davranışı, Kişilik Özellikleri

JEL Kodları: C1, C2, C10

Introduction

The increasing competition in recent years makes it necessary for organisations to concentrate on understanding employees, increasing their performance, and remaining competitive by providing the necessary transformation. Therefore, it is observed that organisations are increasingly benefiting from the concept of Psychological Contract (PC) in terms of demonstrating Organizational Citizenship Behavior (OCB) from their employees (Krishnan, İsmail, Loon and Muthusamy, 2017: p.1014) and management of employee-employer relations (Buyukyılmaz, 2013: pp.93-94). Particularly in recent years, PC and OCB notions have been frequently investigated in organisational behaviour studies (for example, Ahmad and Zafar, 2018; Atrizka, Lubis, Simanjuntak and Pratama, 2020; Tufan and Wendt, 2020), and they have become essential phenomena that organisations can use to make a difference from their competitors.

Although the assumptions about the mutual obligations of the employee and the employer are well-known opinions in the organisational behaviour and human resources literature (Grimmer and Oddy, 2007: p.154), there are also various studies in the organisational behaviour literature addressing the relationship between PC, OCB and organisational commitment and personality (Çarıkcı, Kanten and Kanten, 2010; Karcıođlu and Türker; Organ and Andreas, 1995). Nevertheless, not many studies examine PC, OCB, employee personality trait interactions, and direct relationships together in detail.

One of the critical theories underlying PC is the Norm of Reciprocity (NR). It is based on the idea that people help others and do not harm people who help them (Gouldner, 1960). In addition, NR also contributes to the theoretical basis of OCB. NR, put forward by Gouldner (1960), is based on the idea that individuals will exhibit positive behaviours in return for their benefits. As a result, the perceptions of PC created by employees may affect behaviours that are not based on any orders and provide benefits for the organisation (Basım and Şeşen, 2006: p.83). In other words, PC may have an impact on employees' organisational citizenship behaviour. The critical question at this point is what role do personality traits have in this relationship. That is to say: It can be thought that employees who have an agreeableness or extraversion compatibility (McCrae and John, 1992) personality trait may exhibit more sportsmanship or courtesy behaviours, which are the sub-dimensions of OCB, than individuals with neurotic personality traits. As a result, the discourse that there is a relationship between the performance of OCB and the personality traits of employees (Elanain, 2007a: p.48) prompts us to investigate this problem in more detail.

Conceptual framework

Organisational citizenship behaviour

Organizational Citizenship Behaviour (OCB) contributes to the organisation's functioning by exhibiting behaviours beyond job descriptions, without being under any order or obligation (Bolino, 1999; Chen et al., 2002; Podsakoff and Mackenzie, 1994; Podsakoff et al., 1997). As an example of these extra-role behaviours of the employees; Helping colleagues, volunteering for overtime, and supporting the socialisation processes of newly recruited employees (Bergeron et al., 2013) can be shown. Researchers have examined and revealed multiple dimensions to distinguish OCB from other aspects of employee performance. In addition to this, although it is discussed in the literature about which behaviours will be handle within the scope of the OCB (For example; Podsakoff et al., 2014; Dekas et al., 2013), the content and dimensions of the OCB coincide conceptually with other behavioural structures such as proactive behaviour, prosocial behaviour and creativity (Provan et al., 2017). Also, different OCB dimensions such as loyalty, initiative, social participation, interest, adaptation to change, interpersonal assistance and personal effort have been defined in other studies (Van Dyne et al., 1994; Morrison, 1994).

Within the framework of the classification made by Organ (1988), OCB consists of five dimensions: courtesy, sportsmanship, altruism, conscientiousness and civic virtue. The "courtesy" dimension is the dimension that best represents the OCB notion (Bitmiş et al., 2014: p.1). Courtesy is a tendency to act proactively in the point of potential organisational problems and to show behaviours to enlighten employees in matters that will affect them (Organ, 1988). "Gentlemanliness" dimension expresses adopting work-related difficulties and problems (Podsakoff et al., 2000: p.639; Netemeyer et al., 1997: p.86). In the self-determination dimension of OCB, behaviours aimed at preventing problems within the organisation are discussed (Organ and Konovsky, 1989; Podsakoff et al., 2000). The fourth dimension of OCB is "conscientiousness". This dimension exhibits some above the expected minimum behaviours (Organ, 1988; Barksdale and Werner, 2001). The final dimension of OCB is the "civic virtue". Civic virtue indicates that employees feel responsible and participatory (Thompson and Werner, 1997; Kidder, 2002). Several variables that are antecedent for OCB have been discussed in the literature. For example, it has been found that employees with high levels of organisational identification have high levels of

OCB (Polat, 2009: p.97). Therefore, it can be thought that PC will be an antecedent variable for the OCB, based on the assumption that the level of identification of an employee with a high perception level of PC may also be high.

Psychological contract

The basis of the concept of psychological contract (PC) lies in Blau's (1964) theory of social exchange and Adams (1965) theory of equality. The principle of reciprocity is the main conceptual element that explains the PC theory (Topcu and Basim, 2015), and it lies under the social exchange theory conceptualised by Barnard and Simon (Schalk and Roe, 2007: p.167). According to Rousseau (1995), PC are individual beliefs shaped by the organisation within the scope of the exchange between individuals and the organisation. In other words, it can be said that it includes the employees' beliefs about what actions are expected from them and what they should expect in return (Rousseau and Greller, 1994: p.385). Thus, ideas and perceptions, expectations in interpersonal relations, objects and events fill the concept of belief (Guney, 2004: p.122). In this context, it is still a matter of debate within which beliefs PCs occur (Guest, 1998: p.651; Conway and Briner, 2009: p.80).

According to Schein (1976), one of the first researchers to use the PC concept, the individual has different expectations from the organisation and the organisation from the individual. Similarly, Levinson et al. (1962: p.20) place expectations based on PCs. On the other hand, expectations should be considered a more comprehensive concept than PCs, as they include beliefs about promises and other expectations arising from causal reasoning (Büyükyılmaz, 2013: p.17). Another concept associated with the PC promises. Promises refer to a commitment to a specific future course of action (behaviour style) (Shore and Tetrick, 1994: p.92; Morrison and Robinson, 1997: p.228). In this context, obligations are based on beliefs about a promise or debt, and it is seen that obligations within the framework of PC are formed within the framework of explicit and implicit promises (Robinson and Rousseau, 1994: p.138).

One of the classifications commonly used in conceptualising PCs is Rousseau, who evaluates PC under two factors (transactional and relational) (Grimmer and Oddy, 2007; Morrison and Robinson, 1997; Rousseau, 1995). The focus of transactional contracts is evaluated with economic relations, while the focus of relational contracts is evaluated based on emotional relationships (Shore and Tetrick, 1994: p.95). Relational psychological contracts are open-ended contracts based on the perception of establishing and maintaining a relationship involving economic and non-economic interests (Yılmaz, 2012: p.27) and also characterise beliefs about obligations based on the change of socio-emotional factors (e.g., loyalty and support) (Grimmer and Oddy, 2007: p.155). PC's include concrete contributions and incentives and facts such as loyalty, commitment, and job satisfaction, which are revealed within the framework of the employment relationship between the employer and the employee (Taylor, 1996: p.11). Behaviours such as loyalty and commitment mentioned in this definition can be considered predecessor variables for OCB because PC deeply affects the employee's commitment to the organisation (Caldwell and Hasan, 2016: p.3). In the light of these theoretical discussions, the first hypothesis of the research has been formed below.

Hypothesis 1: There is a positive and significant relationship between employees' perception of psychological contract and organisational citizenship behaviour.

Personality traits

Factor analysis forms the basis of the studies on the characteristics representing personality structure (Cattell, 1956; Eysenck, 1951). In his study to determine personality traits in 1963, Norman applied factor analysis to a rating scale with 20 features and obtained five factors. These dimensions are; the dimension of extroversion (Barrick and Mount, 1991; McCrae and John, 1992), which includes skills such as being excited, cheerful, talkative, sociable, and social. In the "compatibility" dimension, another dimension of personality traits, the human aspect of individuals is concerned. The self-discipline dimension includes personality traits such as attention, planned action, and focus on success (Somer and Goldberg, 1999). The dimension of openness includes the desire to learn and discover, and finally, the dimension of neuroticism includes negative emotions such as depression, anxiety, and anger (Somer and Goldberg, 1999). Five-factor personality traits have been made a shorter measurement tool in Goldberg's (1992) study and have been the most used model in personality studies in recent years (Langford, 2003: p.1127).

Personality is generally a feature that combines temperament and childhood and can be developed throughout life (Pizur and Knutson, 2009: p.158). In this life curve, personality is the characteristics of behaviour, thought and emotion that individuals exhibit towards events over time (Connor-Smith and Flachsbar, 2007). In addition, personality is one of the most critical factors that affect the perception of the organisational environment and their work, as well as differentiating and separating employees

from each other (Çarıkçı et al., 2010: p.42). In this context, the roles that personality traits can play in the PC and OCB relationship are discussed in more detail below.

The role of personality in the relationship between psychological contract and organisational citizenship behaviour

According to Organ (1988), the perception of justice is one of the factors that plays a vital role in the formation and development of OCB (Gül and Ince, 2011). At this point, in the studies conducted on the subject, they determined that "the perception of organisational justice plays an important role in strengthening the sense of trust of the employees" (Dalı, 2016: p.108) and as a result of this, OCB emerged (Atalay, 2010: p.36). In addition, hostile and robust relations between PC violation and organisational justice (Aykanat, 2014) lead employees to think that trust is a vital antecedent variable for the level of PC perception and the performance of OCB based on it.

According to Rousseau (1995: p.118), PC violation starts with perceiving the difference between expected and actual results. Therefore, PC violation results in the employee fulfilling her obligations less to the organisation and helping her organisation less (Aselage and Eisenberger, 2003: p.497). In other words, when employees perceive a PC violation, they can produce undesirable organisational outcomes such as a decrease in the idea of belonging to the organisation, loss of trust in the organisation, and quitting (Dagli, 2016: p.107). On the other hand, Robinson (1996) found that, in line with empirical evidence, an employee who does not perceive a PC violation often adopts a positive attitude towards the job (Conway et al., 2011), is more likely to adopt an organisational identity (Rodwell et al., 2015), and will most likely exhibit OCB. Otherwise, there will be a decrease in OCB (Shih and Chuang, 2013). In addition to these findings, Jafri (2012: p.29) concluded that PC violation is a critical determinant variable on OCB.

Krishnan et al. (2017: p.1014), in his study involving employees working in public health-related organisations, examined the mediating role of the "agreeableness" personality trait in the relationship between job design characteristics and OCB, and it was found that there was a high level of interaction between this personality trait and job design characteristics (autonomy and social support) and OCB. OCBs are behaviours that do not include task and job descriptions, do not have to be penalised in case of negligence and are mostly displayed due to personal preference. (Podsakoff et al., 2000: p.513). On the other hand, PCs emerge from expressions not explicitly stated to the other party, based on the formal agreements created between the individual and the organisation or the parties' expectations (Herriot, Manning and Jennifer, 1997: p.151). In addition, PC expresses how employees interpret the promises made by their organisations in a definite or indefinite way (Conway and Briner, 2009: p.71). In this context, it may be that the cognitive processes that shape individuals' beliefs about the organisation may be affected by their personality traits and therefore create different PC perceptions as a result of this effect because one of the main reasons individuals develop different perceptions and solutions based on the same events is their personality traits (Erkus and Tabak, 2009: p.216).

There are also studies on the relationship between personality traits and OCB. For example, in a study conducted in the banking sector, there was a significant positive relationship between conscientiousness, compliance and self-discipline personality traits and OCB. However, there was a negative relationship between neurotic personality traits and OCB, and this negative relationship caused the employee to experience organisational problems (Saeedy and Rastgar, 2015). A similar result was demonstrated in a study conducted with a sample of physicians, and it was found that four personality factors except neuroticism were positively correlated with OCB (Kumar et al., 2009: p.73).

Researchers think that the organisational socialisation process significantly affects mental models created for PC in general (De Vos et al., 2003; Payne et al., 2008; Thomas and Anderson, 1998). Therefore, altruism, which includes civic virtue or proactive behaviours to prevent problems, can be essential in forming healthy organisational sociology. In addition, according to Krishnan et al. (2017: p.1016), the "agreeableness" personality dimension, which has an optimistic view of human nature, stands out with its cooperative and helpful features in determining the OCB. Therefore, it can be thought that in cases where neurotic personality traits such as anger and anxiety are dominant, which accompany the perception of PC violation, employees will not exhibit OCB. On the other hand, the self-discipline dimension is a personality trait that shows consistent and meaningful relationships with all job performance criteria in all occupational groups (Barrick and Mount, 1991). In addition, the "altruism" dimension of the OCB and the "agreeableness" personality trait is also the facts that support each other.

Hypothesis 2: The extraversion personality trait of employees has a significant and moderator role in the relationship between psychological contract perception and organisational citizenship behaviour.

Hypothesis 3: *The agreeableness personality trait of employees has a significant and moderator role in the relationship between psychological contract perception and organisational citizenship behaviour.*

Hypothesis 4: *Employees' openness personality trait has a meaningful and moderator role in the relationship between psychological contract perception and organisational citizenship behaviour.*

Hypothesis 5: *Employees' conscientiousness personality trait has a meaningful and moderator role in the relationship between psychological contract perception and organisational citizenship behaviour.*

Hypothesis 6: *Employees' neuroticism personality trait has a significant and moderator role in the relationship between psychological contract perception and organisational citizenship behaviour.*

In the light of this conceptual structure, the research model established among the psychological contract behaviour, organisational citizenship behaviour and the sub-dimensions of five-factor personality traits is included in Figure 1.

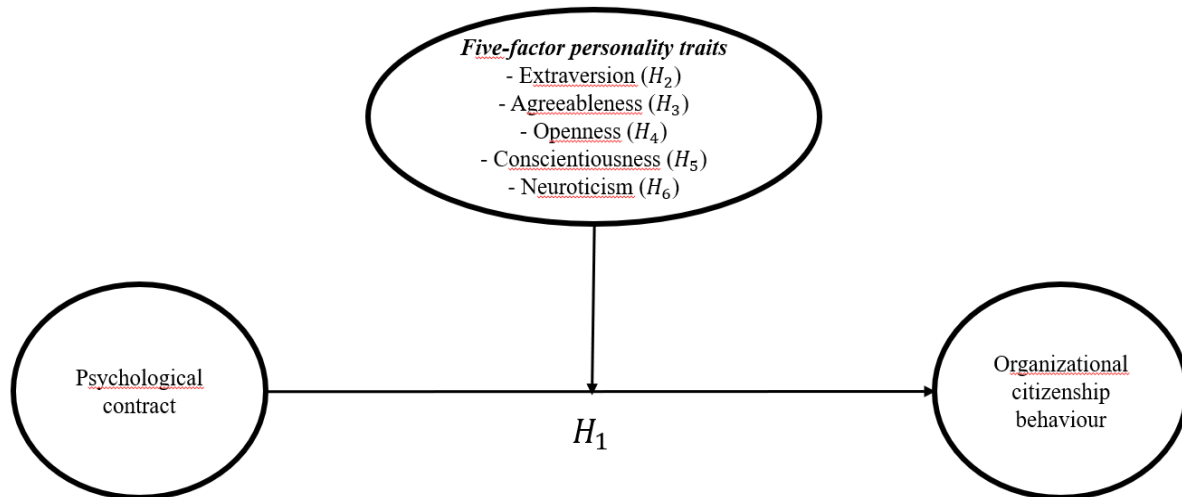


Figure 1: Research Model

In the research model in Figure 1, the independent variable PC, the dependent variable OCB and the variables that play the moderator role were determined as sub-dimensions of personality traits. Based on the theoretical structure of the research, it is thought that personality traits can play a moderator role in the relationship between PC and OCB, based on the logic of conceptual overlap between the proactive and creative behaviour patterns of OCB.

Method

The method section includes the purpose of the study; the research method; the research universe, sampling, and descriptive statistics; data collection techniques, limitations of the study, and the programs used for the data analyses in the study.

The purpose of the study

The study examines the relationship between psychological contract, organisational citizenship behaviour and the five-factor personality traits sub-dimensions dealing with employees in the private sector, and whether the five-factor personality traits sub-dimensions have a moderator role in the relationship between the psychological contract and organisational citizenship behaviour or not.

The research method

The relational screening method, which is one of the quantitative research methods, was used as the research method in the study. In this context, a research model was created between the psychological contract, the organisational citizenship behaviour and the five-factor personality traits sub-dimensions dealing with the employees in the private sector. The relational scanning model is all of the processes that define a situation, develop desired behaviours in the individual and realise learning. A relational screening model is defined as a method that examines the change in two or more variables simultaneously (Karasar, 2011). Therefore, it was evaluated that the selected research method was the most appropriate. Confirmatory factor analysis was used to check whether the structure of the scales was compatible with the collected data. Correlation analysis and hierarchical regression model were used in the analysis of the established model.

Universe of study, sampling, and descriptive statistics

The main population of the study consists of people working in the private sector (finance, health and informatics sectors) in Mersin, Ankara, İzmir and Istanbul provinces, and the sample consists of 256 people selected from this population using the convenience sampling method. The convenience sampling method was chosen due to the difficulty of collecting data caused by the Covid 19 pandemic. The data used in the study were collected online from the personnel working in 18 private enterprises (6 accounting offices, four companies operating in the field of informatics, eight private hospitals) between 01-31 January 2021 using three scales and a questionnaire created on Google forms. Before the data was collected, a pool was created for the participants, and the participants were asked to fill in the questionnaire by sending a link from the WhatsApp application. In the beginning, 402 people in the pool were sent a link to fill in the questionnaire, but 256 people returned by filling out the questionnaire. The sampling volume of the study was calculated using a table in Sekaran (1992: p.253). The sample size representing the universe at a 5% significance level with a 5% error margin was calculated as 185. This value is the minimum sample size targeted about to with concerning sample volume in the study. Because this result is higher than 185, which is calculated as the minimum number of samples, it was decided that the collected data were sufficient to conduct for analysis.

Of the responders,

- 110 were female (43%), and 146 were male (57%);
- 1 had a primary school's degree (1%), 29 had a secondary school's degree (11%), 111 had a high school's degree (44%), 93 had a bachelor's degree (36%), 20 had a master's degree (7%), and 2 had a doctorate (1%);
- 107 were working in the health sector (42%), 59 were working in the accounting sector (23%), and 90 were working in the informatics sector (35%);
- 50 were in Mersin (20%), 99 were in İstanbul (39%), 66 were in Ankara (26%), and 41 were in İzmir (15%);
- 7 were between the ages of 21 and 30 (3%), 124 were between the ages of 31 and 40 (48%), 52 were between the ages of 41 and 50 (20%), 32 were between the ages of 51 and 60 (12%), and one was aged 60 or older (1%);
- 130 were married (51%), and 126 were unmarried (49%).

Since the data were collected from personnel working in different fields in the private sector, three groups were formed regarding the answers given by those working in the field of health, informatics and finance, and a one-way ANOVA test was conducted for the average values of the answers given by the participants to each scale. In this context; It was established that the null hypothesis about the means of the responses to each scale is " $\mu_A = \mu_B = \mu_C$ " and the alternative hypothesis is "at least one of the means is different from the others". As a result of the analysis, there was no significant difference between groups for each scale (Psychological Contract Scale: $F = 0.467$ and $p(0.627) > 0.05$, Organizational Citizenship Behaviour Scale: $F = 1.014$ and $p(0.368) > 0.05$, Five Factor Personality Scale: $F = 0.459$ and $p(0.633) > 0.05$).

Data collection techniques

In the study, a survey form comprising four sections was used as the data collection tool. 1. Demographic Data, 2. Psychological Contract Scale, 3. Organizational Citizenship Behaviour Scale, and 4. Five-factor Personality Traits Scale.

The first section includes six questions about the demographics of the respondents.

The second section includes 17 questions about the Psychological Contract Scale (two sub-dimensions).

The third section includes 19 questions about Organizational Citizenship Behaviour Scale (five sub-dimensions).

The fourth section includes 44 questions on the Five-factor Personality Traits Scale (five sub-dimensions), which amounted to 86 questions.

The considerations about the scales used in the study are explained in the following paragraphs.

The psychological Contract Scale was initially developed by Millward and Hopkins (1998) and then adapted to Turkish by Mimaroğlu (2008). The scale comprises two sub-dimensions, the operative sub-dimension and the relational sub-dimension, and there are 10 question items in the operative sub-

dimension and 7 question items in the relational sub-dimension. The respondents were asked to answer the questions created based on a 5-point Likert scale (1. Strongly disagree, 2. Disagree, 3. Neither agree nor disagree, 4. Agree, and 5. Strongly agree). In the study conducted by Millward and Hopkins (1998), It was reported that Cronbach's alpha coefficient of the scale was 0.65 for the relational sub-dimension; 0.62 for the functional subscale. On the other hand, Mimaroglu (2008) found the Cronbach's alpha coefficient of the whole scale as 0.68 in the reliability analysis conducted.

Organizational Citizenship Behaviour Scale was initially developed by Organ (1988) and adapted to Turkish by Basım and Şeşen (2006). The scale comprises altruism (5 items), conscientiousness (3 items), courtesy (3 items), gentleman's (4 items) and civic virtue (4 items) sub-dimensions, and includes a total of 19 items. The respondents were asked to answer the questions created based on a 5-point Likert scale (1. Strongly disagree, 2. Disagree, 3. Neither agree nor disagree, 4. Agree, and 5. Strongly agree). Basım and Şeşen (2006) used two samples regarding the validity and reliability of the scale in their study, and Cronbach's alpha coefficient values were calculated as 0.89 in the first sample group while 0.94 in the second sample group.

Five-factor Personality Traits Scale: The Five-Factor Personality Trait Scale was developed by Benet-Martinez and John (1998) and adapted to Turkish by Sümer and Sümer (2005). The scale comprises five sub-dimensions: extroversion, adaptability, openness to development, self-discipline and neuroticism. There are eight items in extroversion, nine items incompatibility, ten items in openness to development, nine items in self-discipline, and eight in neuroticism sub-dimension. The respondents were asked to answer the questions created based on a 5-point Likert scale (1. Strongly disagree, 2. Disagree, 3. Neither agree nor disagree, 4. Agree, and 5. Strongly agree). In the adaptation study conducted by Sümer and Sümer (2005), Cronbach's alpha coefficients of the scale were found between 0.64 and 0.77 (Bulut and Yıldız, 2018).

Limitations of the study

The study is limited to Ankara, İstanbul, İzmir and Mersin provinces, and statistical methods applied, private sector, the scales used for collecting data in the study, and the programs used in the analyses. Besides the research sample size, the period when data was collected was also limited due to Covid 19 pandemic.

The programs used in the analyses of the study

SPSS package programs and R programming language were used in the analysis of data in this study. In this context, The SPSS package program is used to calculate the coefficient of correlation between variables, mean and standard deviation values and hierarchical regression analysis; The R programming language was used in the confirmatory factor analysis of the scales and also testing the univariate and multivariate normality assumption of the data.

Findings

The findings obtained from the analysis made with the SPSS package program and R programming language in the research are presented in four sections. The first part of the study checked whether the data used provided the assumption of univariate and multivariate normal distribution. In the second part of the study, confirmatory factor analyses of the scales used in the study were implemented. In the third part of the study, the means, standard deviations and correlation coefficients of the data obtained for the sub-dimensions of the psychological contract, organisational citizenship behaviour and five-factor personality traits about employees were examined. Finally, in the fourth part of the study, it was examined whether the five-factor personality traits sub-dimensions have moderator roles between psychological contract and organisational citizenship behaviour or not.

Univariate and multivariate normality tests for the data

Confirmatory factor analysis was used to check whether the data collected in the study were compatible with the structures of the scales. Second, correlation analysis was used to examine whether there was a relationship between variables. Finally, hierarchical regression analysis was used to determine whether the sub-dimensions of personality traits had moderator roles in the relationship between employees' perceptions of psychological contract and organisational citizenship behaviour. In correlation and hierarchical regression analyses, the average values of the data belonging to the sub-dimensions of the organisational citizenship behaviour scale, the psychological contract scale and the five-factor personality traits scale were used. However, within the scope of the analyses, the data should have a multivariate normal distribution in the confirmatory factor analysis and a univariate normal distribution in other analyses. Therefore, it is necessary to check the univariate and multivariate

normality of the data belonging to the scales. In this context, the Shapiro-Wilk Normality Test for univariate normality distribution and Henze-Zirkler MVN Test for multivariate normality distribution in R programming language was performed.

Stats package, stats library, Shapiro test function were used for Shapiro-Wilk Normality Test in R programming language, and MVN package, MNV library and hzTest function were used for Henze-Zirkler MVN Test. The results obtained regarding the tests in question are given in Table 1.

Table 1: Univariate and Multivariate Normality Control of Data

Scales	Shapiro-Wilk Normality Test		Henze-Zirkler MVN Test		
Psychological Contract	W=0,45	p=0,35*	HZ:9,45	p:0,23*	MVN: YES
Organizational Citizenship Behaviour	W=0,85	p=0,12*	HZ:6,54	p:0,16*	MVN: YES
Five-factor Personality Traits	W=0,78	p=0,16*	HZ:8,18	p:0,21*	MVN: YES
* p > 0.05					

In Table 1, according to the Shapiro-Wilk test results regarding the data to be used in the correlation and hierarchical regression model, the data have a univariate normal probability distribution (Psychological Contract Scale: W = 0.45 and p > 0.05, Organizational Citizenship Behaviour Scale: W = 0.85 and p > 0.05, Five Factors Personality Traits Scale: W = 0.78 and p > 0.05) and according to the Henze-Zirkler MVN test results related to the data to be used in the application of the confirmatory factor analysis, the data have a multivariate normal probability distribution (Psychological Contract Scale:

HZ = 9.45 and p > 0.05, Organizational Citizenship Behaviour Scale: HZ = 6.54 and p > 0.05, Five-Factor Personality Traits Scale: HZ = 8.18 and p > 0.05) were determined. Therefore, it was concluded that the normality assumptions regarding the analyses to be made were met.

Measurement tools and confirmatory factor analysis

Before examining the moderator role of the five-factor personality traits sub-dimensions in the relationship between psychological contract and organisational citizenship behaviour, it should be checked whether the data collected on the variables fit the structure of the scales or not. Scales made in Turkey, yet another study of the use of factor analysis and therefore for the adaptation of Turkish, only confirmatory factor analysis was performed. Scales, due to the use in Turkey studies, have yet to factor analysis; confirmatory factor analysis was performed only. Regarding the scales, the goodness of fit values obtained from the confirmatory factor analysis in the R programming language is given in Table 2. For the confirmatory factor analysis in R programming language, psych, foreign and lavaan packages and libraries were used.

Table 2: Goodness of Fit Values of the Scales *

Scales	RMSEA <0.08	CFI >0.90	TLI >0.90	SRMR <0.10
Psychological Contract	0.05	0.96	0.94	0.05
Organizational Citizenship Behaviour	0.07	0.88	0.91	0.08
Five-factor Personality Traits	0.04	0.96	0.95	0.018

* Goodness of fit reference values are arranged according to "acceptable" standards

When the goodness of fit values in Table-2 are examined, all of the mentioned values are compatible with the reference values in the literature. For detailed information on reference values, the publication prepared by Meydan and Şeşen (2015) and the web page at <https://stats.idre.ucla.edu/r/seminars/rcfa/> can be viewed.

Mean, standard deviation and correlation coefficients of the variables

Before the hierarchical regression analysis, to determine the direction and power of the relationship between variables, the means, standard deviations and correlation coefficients of the data obtained regarding the control variables (gender and age), psychological contract and organisational citizenship behaviour variables, and sub-dimensions of the five-factor personality traits variable were examined.

The means, standard deviations and correlation coefficients obtained from the analysis are presented in Table 3. In addition, before calculating the correlations between variables, the means of the scores for each variable were calculated, and these scores were evaluated.

Table 3: Mean, Standard Deviation and Correlation Coefficients of The Variables

Scales	Mean	s.e	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Gender	1,88	0,73	1*								
Age	2,29	0,87	0,63*	1*							
Psychological contract	3,80	0,76	0,52*	0,59*	1*						
Organizational citizenship behaviour	4,12	0,68	0,55*	0,51*	0,54*	1*					
Extraversion	3,91	0,74	0,32*	0,28*	0,45*	0,67*	1*				
Agreeableness	3,80	0,99	0,45*	0,41*	0,44*	0,58*	0,54*	1*			
Openness to development	3,62	0,96	0,54*	0,45*	0,47*	0,58*	0,46*	0,35*	1*		
Conscientiousness	3,75	0,71	-0,27*	-0,26*	-0,19*	-0,05*	-0,03	-0,14*	-0,28*	1*	
Neuroticism	3,98	1,04	-0,22*	-0,29*	-0,28*	-0,31*	-0,22*	-0,176*	-0,35*	0,41*	1*

Looking at the means of the control variables, psychological contract and organisational citizenship behaviour variables, and the sub-dimensions of the five-factor personality traits variable in Table 3, only the mean of the control variable-age is below the midpoint (majority of the participants are in the age groups 20 and below, 21-30 and 31-40 age groups.) and the means of the other variables are above the midpoint when the relationship coefficients between variables are examined; it was determined that all of the values in question were significant ($p < 0.05$), the variables of self-discipline and neuroticism had a negative relationship with other variables, a positive relationship between themselves and a positive relationship between the other variables.

The moderator roles of five-factor personality traits sub-dimensions in the relationship between psychological contract and organisational citizenship behaviour

In the literature, the moderator variable is defined as another variable that affects the power and direction of the relationship between a dependent variable and an independent variable. For a variable to be accepted as a moderator variable, there must be a relationship between the independent and dependent variables and the interaction term consisting of independent and moderator variables in the regression equation and the dependent variable (Aiken and West, 1991). However, it is not necessary to have a relationship between the moderator variable and the dependent variable. Moderator variables can increase the power of this relationship in the relationship between two variables and change the direction of the relationship from negative to cheerful or from positive to negative (Baron and Kenny, 1986). The structural equation or hierarchical regression model method is generally used to determine the moderator effect between two variables. In the study, a three-step hierarchical regression model was used to examine the moderator roles of personality traits sub-dimensions in the relationship between psychological contract and organisational citizenship behaviour. In the hierarchical regression model, firstly, the relationship between dependent and independent variables is examined. Subsequently, in the second step, the moderator variable is included in the analysis. After the results in both steps are significant, the interaction variable (independent variable X moderator variable) is included in the analysis. The changes in the value in each step and the partial F value are examined, and then it is decided whether the moderator variable has a moderator role in the relationship between the dependent and the independent variable or not (Baron and Kenny, 1986).

While the dependent variable in all steps of the hierarchical regression model used in the study was the SVD variable, the independent variables of these models were age and gender variables (control variables) in the first step; control variables and psychological contract in the second step, and control variables, psychological contract, sub-dimensions of five-factor personality traits and interaction variables (variables with values obtained by multiplying the values of the sub-dimensions of the psychological contract and the five-factor personality traits variable) in the third step. It should also be

noted that the procedures suggested by Aiken and West (1991) should be applied before proceeding with hierarchical regression analysis. In the first step, the moderator and independent variables were centralised to eliminate multiple connections between the moderator variables. In the second step, the interaction term consisting of the product of the independent variable and the moderator variable was obtained. In this context, the analysis results in the SPSS package program regarding the hierarchical regression model are given in Table 4. However, within the scope of the analysis and the assumption of the normal distribution of variables, it is necessary to determine whether there is a multiple linear connection problem between the independent variables in the model. As a result of examining the tolerance and VIF values obtained, results confirm no multicollinearity between the independent variables in each step of the hierarchical regression model (Tolerance > 0.2, VIF < 10).

Table 4: Hierarchical Regression Analysis Results

Dependent Variable: Organizational Citizenship Behaviour					
	Non-Standardised β (p)	Standardised β	Standard Error	ΔR^2	ΔF
Step-1: Control Variables					
Constant	4.123 (0.000)		0.043	0.053	6.503 (0.002)
Gender	- 0.082 (0.044)	- 0.121	0.044		
Age	- 0.118 (0.009)	- 0.173	0.044		
Step-2: Control Variables and Main Effect					
Constant	4.123 (0.000)		0.034	0.431	58.470 (0.000)
Gender	- 0.048 (0.047)	-0.070	0.035		
Age	- 0.095 (0.007)	-0.139	0.035		
Psychological contract	0.422 (0.000)	0.618	0.034		
Step-3: Control Variables, Main Effects, Moderator Effects and Interaction Variables					
Constant	4.184 (0.000)		0.033	0.596	25.175 (0.000)
Gender	- 0.073 (0.029)	- 0.107	0.033		
Age	- 0.074 (0.023)	- 0.108	0.032		
Psychological contract	0.188 (0.000)	0.276	0.042		
Extraversion	0.131 (0.002)	0.192	0.043		
Agreeableness	0.178 (0.000)	0.260	0.049		
Openness to development	0.136 (0.003)	0.253	0.043		
Conscientiousness	- 0.119 (0.001)	- 0.174	0.036		
Neuroticism	- 0.089 (0.005)	- 0.300	0.031		
Psychological contract X Extraversion	- 0.047 (0.181)	- 0.112	0.035		
Psychological contract X Agreeableness	- 0.014 (0.736)	- 0.026	0.041		
Psychological contract X Openness to development	- 0.092 (0.025)	- 0.146	0.041		
Psychological contract X Conscientiousness	0.003 (0.926)	0.005	0.028		
Psychological contract X Neuroticism	- 0.001 (0.985)	- 0.001	0.039		

When the values for the three-step hierarchical regression analysis models in Table 5 are examined; it has been determined that in the first model, age and gender variables, which are the control variables, contributed 5.3% to the change in the organisational citizenship behaviour variable; the control variables and the psychological contract variable (main effect) that entered in the second model contributed 43.1% to the change in the organisational citizenship behaviour variable; and the control variables, the psychological contract variable (primary effect), moderator effects (the personality traits sub-dimensions) and the interaction variable (the personality traits sub-dimensions X psychological contract), contributed 59.6% to the change in the organisational citizenship behaviour variable. When the standardised β coefficients of the final model are examined, psychological contract ($\beta = 0.276$, $p < 0.05$), extraversion ($\beta = 0.192$, $p < 0.05$), agreeableness ($\beta = 0.260$, $p < 0.05$), openness to development ($\beta = 0.253$, $p < 0.05$), conscientiousness ($\beta = -0.174$, $p < 0.05$), neuroticism ($\beta = -0.30$, $p < 0.05$), and the interactional terms psychological contract and openness to development ($\beta = -0.146$, $p < 0.05$) had

significant effects. Also, the values of each step that can be evaluated as an indication that the variables added to the models at each step are significantly added to all models (step 1: $p(0.002) < 0.05$, step 2: $p(0.000) < 0.05$ and step 3: $p(0.000) < 0.05$).

At the end of the analysis, it was seen that the sub-dimensions of five-factor personality traits, openness to development, had a moderator effect on the relationship between psychological contract and organisational citizenship behaviour. Therefore, besides the process suggested by Cohen et al. (2003) was followed to examine the moderator effect of the openness to development sub-dimension that is one of the sub-dimensions of the five-factor personality traits sub-dimensions in the relationship between the psychological contract and organisational citizenship. In the moderator impact analysis, the effects of the variable of which moderator is investigated in very low (1), low (2), medium (3), high (4) and very high (5) can be determined by the regression curve drawn (Aiken and West, 1991). This test reveals whether the relationship between employees' perceptions of psychological contract and organisational citizenship depends on the sub-dimension of openness to development, one of the dimensions of the five-factor personality traits. Therefore, in cases where the openness to development sub-dimension of the five-factor personality traits sub-dimensions, which are the moderator variables, is very low (1), low (2), medium (3), high (4) and very high (5), there is a difference between the perception of psychological contract and organisational citizenship behaviour. The significance of the relationships was tested with the regression curve drawn.

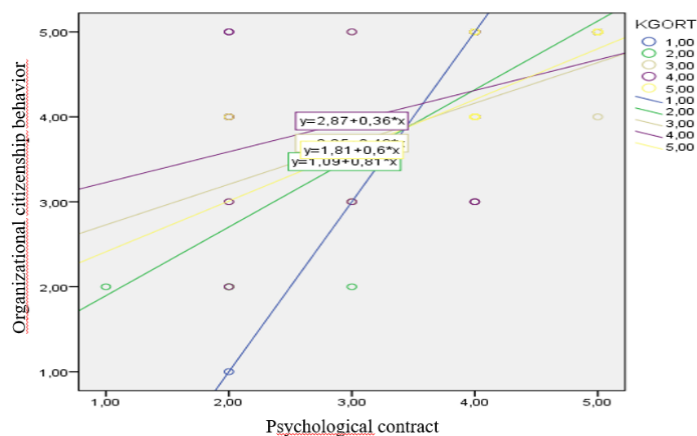


Fig. 2: The Moderator Effect of Personality Traits' Openness to Development Sub-Dimension

In Figure 2, five regression lines show the state of the five-factor personality trait variable in five different levels of openness to development sub-dimension between the psychological contract and the organisational citizenship behaviour. It is observed that five regression curves related to the five-factor personality traits sub-dimension of openness to development, which were established depending on the psychological contract and the organizational citizenship behaviour, showed a positive slope linear relationship with the psychological contract from low to high values, and all five regression lines were that the coefficients are significant (1st level: $\beta = 0.92$, $p < 0.05$, 2nd level: $\beta = 0.81$, $p < 0.05$, 3rd level: $\beta = 0.42$, $p < 0.05$, 4th level: $\beta = 0.36$, $p < 0.05$, 5th level: $\beta = 0.60$, $p < 0.05$) were determined. In this case, it supports the result obtained within the scope of the hierarchical regression model. Therefore, in summary, it can be said that the five-factor personality traits sub-dimension of openness to development has a moderator role in the relationship between the psychological contract and the organisational citizenship behaviour. In this case, the H_1 and H_4 hypotheses were accepted, and the other was not accepted.

Conclusions and recommendations

In the study, the relationship between the psychological contract and organisational citizenship behaviour perceptions of the private sector employees and the sub-dimensions of the five-factor personality traits (extraversion, agreeableness, openness, conscientiousness, and neuroticism), and whether the sub-dimensions of personality traits have moderator roles in the relationship between psychological contract perceptions and organisational citizenship behaviour perceptions were examined. The psychological contract scale collected the data used in the study, the organisational citizenship behaviour scale, and the five-factor personality traits scale applied to the personnel working in the informatics, health and finance sectors within Ankara, Istanbul, Izmir and Mersin Metropolitan Municipality. The established model was analysed with hierarchical regression analysis using the SPSS package program and interpreted according to the statistical values obtained. At the end of the study, a significant relationship was found between the employees' psychological contract perceptions and

organisational citizenship behaviour and the sub-dimensions of the five-factor personality traits. In addition, it was found that the sub-dimension of openness to development, which is one of the sub-dimensions of personality traits, has a moderator role in the relationship between the PC perceptions and organisational citizenship behaviour of working personnel. In this context, the acceptance status of the hypotheses established in the study is presented in Table 6.

Table 3: Results of Hypotheses

Hypotheses		Status
H_1	There is a positive and significant relationship between employees' perception of psychological contracts and organisational citizenship behaviour.	Accept
H_2	The extraversion personality trait of employees has a significant and moderator role in the relationship between psychological contract perception and organisational citizenship behaviour.	Reject
H_3	The agreeableness personality trait of employees has a significant and moderator role in the relationship between psychological contract perception and organisational citizenship behaviour.	Reject
H_4	Employees' openness personality trait has a significant and moderator role in the relationship between psychological contract perception and organisational citizenship behaviour.	Accept
H_5	Employees' conscientiousness personality trait has a significant and moderator role in the relationship between psychological contract perception and organisational citizenship behaviour.	Reject
H_6	Employees' neuroticism personality trait has a significant and moderator role in the relationship between psychological contract perception and organisational citizenship behaviour.	Reject

The psychological contract and the organisational citizenship behaviour variables are among the essential concepts in organisational behaviour literature. If the psychological contract perception of the employee is high, it is expected to show the organisational citizenship behaviour accordingly. For example, during the employment relationship, as a result of the fulfilment of the obligations by the employer and the effective functioning of the psychological contract; various studies are showing the emergence of positive employee attitudes and behaviours such as high organisational commitment, job satisfaction, workplace motivation and organisational citizenship behaviour (e.g. Bordia and Tang, 2008; Coyle-Shapiro, 2002; McDonald and Makin, 2000). On the other hand, the breach of the psychological contract, which is defined as the failure of the organisation to meet or respond to the obligations of the organisation to employees, can produce unwanted behaviours (e.g., workplace deviance, anti-productivity behaviour) in organisations (Balogun et al., 2018). The most important of these behaviours is the employees' withdrawal of their organisational citizenship behaviours.

In the study, a positive relationship was found between the employees' perception of psychological contract and their OCBs, and this result coincides with other studies in the literature (For example; Ahmad and Zafar, 2018; Atrizka et al., 2020; Tufan and Wendt, 2020; Ozturk et al., 2017). In addition, in a study conducted by Williams and Anderson (1991), a distinction has been made between organisational citizenship behaviours that benefit the institution and organisational citizenship behaviours towards those who indirectly contribute to the institution. Therefore, since the psychological contract expresses the belief in the institution's obligations rather than the individuals, it is evaluated that the violation of the psychological contract will affect the organisational citizenship behaviours towards the institution rather than the citizenship behaviours towards the individuals. As Morrison (2000) states in his study, if employees believe that the institution violates the contract, they will respond to this situation by reducing their contribution to the institution. In conclusion, the findings obtained in the study are in line with the results of the research of Isci (2010) and Can (2011), which examined the effect of the violation of psychological contracts on organisational citizenship behaviour.

Today, organisations have to get maximum efficiency from their most valuable resources, their employees, to stay competitive. In this context, when we consider the research findings from the managers' perspective, it can be said that employees with high PC will increase organisational performance by exhibiting OCB, thus providing solidity to the organisation's competitive position.

Managers need to know their subordinates' personality traits to display more effective management and increase organisational performance. Personality traits of employees affect many of their behaviours both positively and negatively. Thus, much research has been done on this subject in the literature. In particular, the moderator role of the personality traits variable among other variables (e.g. job satisfaction, organisational commitment, etc.) has been investigated (Barlett and Anderson, 2012; Eissa and Lester, 2017; Elanain, (2007b). Nevertheless, the moderator role of the sub-dimensions of the five-factor personality traits in the relationship between psychological contract and organisational citizenship behaviour has not been investigated. Besides the contributions of the results obtained in the study to the literature, there are also some limitations. The sample created in the study represents only

the private sector's informatics, finance, and health fields. Therefore, to achieve better results in the private sector, it is considered that applying the results obtained to other areas of the private sector and comparing the results can be a guide for future studies. In addition, the study can also be applied to those working in the public sector, and by combining it with the results obtained from the private sector, a meta-analysis study can be conducted to reach more general results.

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