



The Effect of Type A Personality Trait on Individual Innovativeness: The Mediator Role of Psychological Empowerment and The Moderator Role of The Organizational Justice*

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Keywords

Individual Innovativeness, Type A Personality, Psychological Empowerment, Organizational Justice, ICT.

Abstract

The aim of this study is to observe the effects of Type A personality trait on employees' individual innovativeness and to investigate the mediating effect of psychological empowerment and the moderating role of organizational justice. The sample of the research consists of 355 white collar participants working in ICT sector in Turkey. Findings of the research demonstrate that the employees are mostly in two categories which had an exactly the same score; Early Adaptors and Early Majority category. Type A personality, psychological empowerment and organizational justice have positive relations with Individual Innovativeness. In Type A personality trait's relationship with individual innovativeness, psychological empowerment had mediating effect whereas there was no evidence of organizational justice having moderator effect in the same relationship. When Type A and Type B group are compared, Type A had a more positive relationship with individual innovativeness.

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1. Introduction

The rapidly changing market dynamics, increasing customer demands and expectations, shortened the life cycles of products offered by companies. In this economic battle innovativeness has become a critical factor for almost all sectors (Uzunbacak, 2013). In that sense, companies are in search of innovative ways to deliver their product and at the same time sectors converge with each other. Amazon's entry into the health sector, the growth of the sharing economy and the joint efforts of the companies to combine their own competencies, brand collaborations and co-working strategies are the new business models that have emerged. Having a competitive advantage and being in a superior position in a dimension is very important for a company's survival.

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Being an innovative company is the critical mission wherein parallel companies more and more expect their employees to have individual innovative orientation and behavior. In today's increasing complex business environment, companies rely on their employees to be innovative so that they can differentiate in their sectors. Being innovative, in different from their position at work, is widely an expected feature from all employees.

According to the economic development; 1950-60 was the time for "Efficiency", 70-80s for "Quality", 90s "Flexibility" and 2000s is for "Innovation" (Aksay et al., 2011). It is expected that companies that are innovative and open to innovation grow faster.

Companies with innovative employees enjoy the benefits like: accessing to the new markets faster, increasing the current market share constantly, controlling the productivity and profitability levels, reducing costs and increasing the competitiveness reflexes (Gümüő, 2015; Tohidi & Jabbari, 2012).

One of the most important indicators of innovation are the success stories that is spun off from companies. There are not many such examples of these kinds of success stories in Turkey. According to "World Innovation Index" that determine the level of innovation, level of the countries, Turkey declined to 37.4 points and to 49th position (https://www.theglobaleconomy.com/rankings/GII_Index/) meaning that there is a great potential for development. The trading markets also have a significant impact on innovation. For example, the innovativeness of companies operating in Turkey at Consumer Electronics develops positively with respect to others (Ilman, 2009). As the number of innovative companies in a country increases, the level of competitiveness of the country increases as well (Knight, 2015). Making a difference in uncertain environments and creating value in competitive new markets is accomplished by innovative behavior (Naktiyok, 2007). This behavior is provided by employees, since companies that have more innovative employees make better performance (Yalçın, 2018; Erdil & Kitapci, 2007; Jong & Vermeulen, 2003).

According to the Theory of Evolutionary Economics, the ultimate aim is not to optimize the total system but to be able to adapt to changing conditions. (Acar, 2014; Metcalfe, 1994) Consequently the 5-year long-term plans for organizations have now been replaced by 100-day planning.

As stated by the many top executives, innovativeness is a concept related to people rather than investments in R&D and Technology (Aksay et al., 2011). Humanitarian policies, which will make employees feel important, provide the basis for shared communication platform among employees and teams, and also provide individual motivation (Tokmak, 2008). Employees with individual motivation exhibit individual innovativeness.

In companies with low turnover, there is a high level of individual innovativeness (Durna, 2002). The main reasons for this are; employees experience level increase that results from deep knowledge come with knowing the company and the market, being able to recognize more opportunities over time, and the elimination of the anxiety and performance pressure as a result of loyalty and flexibility.

Employees' beliefs and behaviors are the most important determinant for individual innovativeness. In this research, the effect of Type A personality trait, psychological empowerment and organizational justice effects on individual innovativeness is examined.

In this context, this study begins with a literature review of individual innovativeness, psychological empowerment, organizational justice and Type A personality trait. Methodology and findings are presented in the following section. The results of the analyses with the recommendations for further researches are in the last section.

2. Theoretical Framework and Review of the Literature

The second part of the research consists of the definitions and literature review of the Innovativeness and Individual Innovativeness, Psychological Empowerment, Organizational Justice and Type A Personality Trait.

2.1. Innovativeness

In his book, *The Theory of Economic Development*, Joseph Schumpeter describes innovativeness as: *"to create a new product or to modify the features of an existing product"* and launch it to a market, to improve a manufacturing process or to create a totally new market and category (Schumpeter, 1934; Dursun, 2015). Innovation, derived from the Latin word *"innovare"*, is summarized as *"doing something new"*, incorporating with the concepts of innovativeness. Innovativeness is the steps and all the factors included in the process where as innovation is the "outcome" of this process (Karadağ, 2018; Sungur, 2007). Destructive Innovation is the process where old ideas and products, like a natural law, cannot cope with and new ideas and products and disappear (Aksay et al., 2011).

Studies on Innovativeness and Innovation is mainly focused on two perspectives, one the characteristics and features of the innovation and two the behavior and characteristics of peoples individual innovativeness.

Diffusion of innovation is the root of the studies done on this subject. Tarde mentioned that, while adapting the innovations, first few people adopt it then by the time the adaptation frequency increases forming an S-curve (Tarde, 1903). In 1930s H. Earl Pemberton, stated that the spread of cultural characteristics within the society is like a bell-curve. Later Bryce Ryan and Neal Gross supported the Tarde's S-Curve in their research examining the adaptation of new seed types among farmers in Iowa. They also classified the farmers according to the degree of adoption and proved that diffusion is a communication process (Ryan & Gross, 1943). The 1950s, the normal distribution view H.Earl Pemberton in Iowa State University was accepted with the Technology Adaptation Life Cycle and adaptation was classified in 5 categories. Later Rogers M. Everett published his most popular book, *"Diffusion of Innovations"*. According to this; diffusion of innovation is a process where; innovation, communication channel, time, and the interaction of social system are involved (Rogers, 1962).

Individual Innovativeness; it is the individual's willingness to innovate and his orientation towards innovation (Kılıçer, 2011; Uz Kurt 2008). Hurt et al. (1977)

defined individual innovativeness as the willingness to try new things (Hurt et.al, 1977) and being open to change (Pallister & Foxall, 1998).

Individual innovativeness is a continues process and is not discontinues the effort (Tokmak, 2008). Three methods come to the fore in measuring individual innovativeness: First is Time of Adaptation Method where Rogers (1983) stated that the innovativeness within the company is related with time of adaptation. According to this, the adoption of innovation and the diffusion among people determine innovativeness (Onağ, 2014). Content and structural deficiencies of the method are indicated (Midgley & Dowling, 1978; Goldsmith, 1991). Second is Cross - Sectional method where Midgley and Dowling (1978) tried to explain and measure innovativeness with respect to individuals with multiple innovations in different areas. In this method, the personality characteristics of the individual were not included. A numerical measurement is preliminary in focus. Third is Willingness to Change Method in which Hurt et al. (1977) focus on individual's motivation and desire to change as the source of innovation.

In order to create a competitive company; employees who work there need to be proactive, risk taking and motivated, in different from their job role and status, and maintain their momentum (Tunç, 2007). Individuals that are highly innovative evaluate the negative effects of problems as positive and continue to progress in line with their targets and goals. The motivation to accomplish something new allows them to be enthusiastic (Tunç, 2007). Most likely there is a preference for the subject that they are working on, which is either they chose it specifically or it is something that they deeply care about it. They are good at planning and communicating. Today, customers and problems are the two top sources of innovation and the continuous communication is critical. With creative problem solving capability innovative employees can contribute by adding new perspectives and intuitive approaches (Eren, 2010; Garfield et al., 2001). Innovative employees work efficiently and productively and they tend to be independent and risk taking (Buttner & Gryskenicz, 1993 ; Eren, 2010).

Individual innovativeness simply starts with determining a specific problem and opportunity, continues with finding ideas inside and outside the company. Later a model and a prototype of the solution is developed. If the solution is accepted it follows with launch and diffusion (Çelik, 2012; Carmeli et al., 2006).

The factors of Individual Innovations are defined in the below:

Resistance to change: This factor is aimed at measuring negative thoughts who feel distance to innovativeness. People who have high resistance to change need to see the concrete benefits of innovation and act, they do not take risks and adapt to the innovation later (Karadağ, 2018). Their response to innovation can be positive / negative / active / passive. Resistance to change can either be direct rejection or discreet rejection. The motivation behind these actions might be; being difficult, disbelief, lack of knowledge (Biçer,2017; Gordon, 1993).

Opinion-leading: With this factor, the individual's thinking outside the box and non-standard actions are considered. Opinion- Leading factor is critical for gathering the workforce necessary for innovativeness and the leading diffusion process (Biçer,2017; Beycioğlu, 2009).

Openness to experience: This factor assesses an individual's positive attitudes, to experience, courage and risk taking for new ideas. It is related to thinking differently and freedom. People that are high on this factor have; a wide perspective, contemporary taste and are curious. (Biçer,2017; Erdheim et al., 2006). It's the opposite of conservatism.

Risk-taking: This factor measures the situation in which people are motivated by curiosity in uncertainty and keep momentum to move on. It is imperative to take risks for entrepreneurs and provide high performance (Biçer, 2017).

Adding to the factors there are 5 different personality categories for Individual Innovativeness: 1) Innovators who are the first to adopt the innovation. They are open to risk taking, tolerant to uncertainty, courageous, hasty, experimenter (Rogers, 1963). Although scientific knowledge is important for them; they are also social, visionary, have above average income, and love to travel (Tırpan, 2016). Early adapters who are opinion leaders in their social systems, and their interpretation / direction is largely influence the subsequent adoption process (Kılıçer, 2011). They can also be compared with today's social media phenomenons due to similarity that they are very effective on other and are young. They have high opinion leadership traits and their communication skill enable to convince and create diffusion in the system (Karadağ, 2018; Yeloğlu, 2009). 3) Early majority: They are the bridges between people who adapt and did not adapt the innovation (Yeloğlu, 2009). They approach the innovations carefully, spend a lot of time thinking before adapting (Tırpan, 2016). 4) Late majority: They are distant to innovations, have lower education degree, with a high average age, who have limited use of social media. They need all the uncertainties to be cleared in order to adapt innovation and to be highly recommended by the community and in one-to-one communication to adapt an innovation (Kılıçer, 2011, Başaran & Keleş, 2015). They must trust the innovation before embracing it, because they are restrained and skeptical. 5) Laggards: These individuals are dependent on the past are highly resistant to change (Tırpan, 2016).

Individual Innovativeness is the central theme in this study and desired subject to be analyzed, so that it is detailed mostly.

2.2. Psychological Empowerment

Psychological Empowerment is a subject that is widely discussed and searched. There are several different definitions and views on this subject. Thomas and Velthouse (1990, p.668) defined psychological empowerment as "giving power and authority to employees and enabling them to take action" and increasing instinctive motivation of employees towards their job (Luoh et al., 2014). Psychological empowerment is enabling employees so that they can affect the events and outcomes (Zahrani et al; 2012, Hanold, 1997; Foster et al., 1995).

There is mainly two mainstream research area on psychological empowerment. First one focuses on the superior and managerial practices that are done to give employees control of the resources (Ergeneli et al., 2007; Niehoff et al., 2001). The second approach focuses on the employees' perspective and tries to see how employees interpret this practices and efforts. Thomas and Velthouse and Spreitzer contributed this subject on employee perspectives, where later on

Robbins focused on the interaction between employee perspective and organizational efforts (Thomas & Velthouse, 1990; Spreitzer, 1995; Robbins et al., 2002).

Psychological empowerment has 4 factors: First one is meaning which is the value of a goal or purpose compared with individual's ideals (Thomas & Velthouse, 1990). Second is a competence that is an individual's belief for having necessary qualifications to fulfill a task. Third is choice which is employees' autonomy in work process. Fourth is an impact that is level of employees' effect of outcome at the work (Spreitzer, 1995). The combination of these concepts is needed to see the full picture of empowerment (Ergeneli et al., 2007; Koberg et al., 1999).

Spreitzer stated that innovation is one of the outcomes of empowerment process (Spreitzer 1995). Also mutual trust is also an important outcome that is important for individual innovativeness (Ertürk, 2012; Brunetto & Far-Wharton, 2007). There are many studies show that there is a positive relationship between psychological empowerment and individual innovativeness (Durmaz, 2011; Fernandez & Moidogaziev, 2013; Iari et al., 2012; Kmiecik, 2012). One main reason for his relation is that employees can see different perspectives and detect important problems and insights if they are empowered and think that their job is meaningful (Luoh et al., 2014; Gilson & Shalley, 2004). Also, self-determination is the root for employees' instinctive motivation and willingness to work with energy to finish the job and making the innovation in individual innovativeness case (Luoh et al., 2014; Deci & Ryan, 1991; Spreitzer, 1995).

2.3. Organizational Justice

Justice is always been an important and essential theme in various disciplines. It is considered as the most important concept and value in all societies. Regarding social justice studies and theorems; Relative Deprivation, Exchange Theory and Equity Theory are the ones that have set the basis of this subject (Colquitt et al., 2001). Equity theory has the greatest effect on the background of the subject which widened the subject perspective by explaining that people make judgments and opinions with respect to what they give in and get by constantly comparing with others efforts and gains.

In modern definitions organization justice is considered as employees' perceptions on employers' behaviors towards them and the result of this behaviors on employees (Çelik, 2012; Greenberg, 1987). It consists and deals with all the interactions in the workplace that are directly or indirectly linked with employers. With respect to this linkage, concepts that are subject to organizational justice can be either processes in the organization or behavioral patterns of the employers.

With respect to factors organizational justice there are three dimensions that are focused in this study: First one is distributive justice which focuses on fairness of all the outcomes (Salman et al., 2016; Folger & Cropanzano, 1998). Second is interpersonal justice which deals with superiors' relationship with employees and also other interaction an employee has with other people and teams (Salman et al., 2016; Tyler & Bies, 1990; Bies & Moag, 1986). Third one is procedural justice which deals with employee's perceptions and views of the procedures and processes in the decision process of outcomes towards them. Although these

perceptions are regarding on policies, these policies are determined by real people and people value a lot to fairness of the procedures as much as the value they gain from the outcomes (Folger & Cropanzano, 1998; Thibaut & Walker, 1975).

Employees try to create fair and justice environments so that employees will try to maximize their efforts and create high performance (Greenberg, 1990). With respect to that employees show innovative behavior and performance in the environments where they assume that they are treated fairly (Colquitt et al., 2001). Organization justice and individual innovativeness have positive correlations and there is mediating effects of job performance, instinctive motivation, psychological contract, organizational support in most of the researches (Amabile, 1996; Çelik, 2012; Salman et al., 2016; Akram et al., 2016; Oldham & Cummings, 1996; Hsu & Wong, 2015; Armstrong, 2007).

If employees believe that there is fairness in bonuses, performance management and resource allocation they show more innovativeness efforts (Audenaert et al. 2017; Wang et al., 2003). There is a positive relationship between procedural justice, instinctive motivation and innovativeness (Çelik, 2012; Erez & Early, 1993). If employers are respectful and honest it increase interpersonal justice and innovativeness of employees (Barclay et al. 2005). Organization justice is critical with employees who are in direct contact with customers. Their small incremental innovative efforts create huge gains. People who have high organizational justice, tend to make actions that are above their formal business role, which is also the definition of individual innovativeness and also if employees have faith that they will be valued if they show high innovativeness, they tend to make it (Jašková, 2018; Buech et al. 2010; Hsu & Wang, 2015). Also organizational justice is also a motivational process for employees and results with innovativeness by taking initiative meaning "extra role" (Gozukara & Yıldırım, 2016; Janssen, 2000; Smith et al., 1983; Akram et al., 2016).

2.4. Type A Personality Trait

Personality type classification theories are rooted to Jung studies. Whereas later Katherine Briggs and Isabel Myers Briggs developed a psychometric instrument based on Jung's studies. (Myers, 1962) The concept of Type A personality trait researches goes back to Friedman and Rosenman (1974) who tried to find the connection with personality type and behavior patterns with chronic heart disease. Type A and B Personality typologies are the people emotions, thoughts and behaviors that distinguish their habits and perspectives (Semiz, 2017).

The difference between Type A personality with Type B personality is that Type A people are; impatient, competitive orientation impatient, have sense of urgency, aggression (Billing & Steverson, 2013; Beehr, 2001; Spector & O'Connell, 1994). According to Friedman, components of Type A are: insecurity on the current status, aggressiveness, in the mood of urgency, hostility, and self-destruction (Friedman, 1974; Yoder, 1987). Type A people are egocentric and always are in competitive mode (Baltaş & Baltaş, 2000). They act, speak and walk fast they are more aggrieve, can work simulationsly (Durna, 2004; Semiz, 2017). Type B people are the opposite of A and they are more relaxed, less hurried. There are many

reasons behind these traits like constant need to prove themselves (Rayburn & Rayburn, 1997).

There are different type of evidence with Type A Personality and the job performance. There are findings that show there is mediating effect of Type A personality with job stress and job satisfaction whereas there is contrary findings that state there is no mediating effect (Jain at al., 2002; Ivancevich et al., 1982; Denollet, 1993). Type A people have more high achievement motivation so that it is expected to be that they are more performance and target oriented that could make them be more innovative. They have the need to control and they deal better with uncertain environments (Nahavandi et al., 1992; Strube & Werner, 1985; Rayburn & Rayburn, 1997). Type A people are hard workers who work in great momentum but also can act hostile under stress (Özcan & Behram; 2013). There are no direct evidence that link with Type A personality trait with individual innovativeness, but since Type A people are more goal oriented, hard workers, instinctive motivators and act well in uncertain environments, we expect that it has a positive relationship with individual innovativeness.

3. Research Method

In the following parts the methodology and the findings are described in detail. First the research sample is presented and Significance Test, Descriptive Statistics, Factor Loads and Anova Analysis are presented as follows.

3.1. Sample and Data Collection

The research is conducted among the white collar office employees in Information Communication Technology (ICT) private sector employees in İstanbul, Turkey. Online survey with random sampling method is used. Total of 355 employees' responses are received.

The detail information regarding demography of the participants are presented: When we look at the genders' distribution 146 (41,1%) employees are female whereas 209 (58,9%) are male. 212 (59,7%) people are married whereas 143 (40,3%) people are single. According to age distribution: 24 (6,8%) are between 18-24, 95 (%26,8) are between 25-29, 103 (%29,0) are 30-34, 68 (19,2%9 are 35-39, 34 (9,6%) are 40-44, 18 (5,1%) are 45-49 and 13 (3,7%) are 50+ years old. So that 171 (48%) people are in the range old 30-39 – in their 30s.

With respect to education, 88 (%24,8) people have high school diploma, 49 (%13,8) associate degree, 143(%40,3) bachelor's degree, 69 (19,4%) master's degree and 6 (1,7%) have PhD degree.

The total working experience of the employees are: 40 (11,3%) are 1-3 years, 83 (23,4%) are 4,7 years, 104(29,3%) are 8-11 years, 95 (26,8%) are 12-20 years and 33 (%9,3) are above 20 years.

The total working time in their current organization is: 179 (50,4%) are 1-3 years, 100 (28,2%) are 4,7 years, 46 (13%) are 8-11 years, 18 (%5,1) are 12-20 years and 12 (%3,4) are above 20 years.

With respect to their managerial status; 157 (44,2%) have a managerial role meaning that there is at least one employee reporting to them. 198 (55,8%) do not have managerial roles.

3.2. Analyses

The questionnaire consists of 72 items build up with 4 different scales with 5 point Likert:

- Individual Innovativeness Scale that is developed by H. Thomas Hurt, Katherine Joseph ve Chester. D. Cook in 1977 consisting 20 items is applied. In reliability analysis Cronbach Alpha Coefficient is 0,622 and the scale is reliable.
- Organization Justice is measured with Justice Scale and included 20 items. (Niehoff & Moorman ,1993). In reliability analysis Cronbach Alpha Coefficient is 0,905 and the scale is highly reliable.
- Psychological Empowerment Scale (Spreitzer, 1995) consisted 12 items and in reliability analysis Cronbach Alpha Coefficient is 0,835 and the scale is highly reliable.
- Type A Personality Trait Scale (Durna, 2004) consisted 20 items. In reliability analysis Cronbach Alpha Coefficient is 0,783 and the scale is reliable.
- The total Cronbach Alpha Value is 0,879 and the scale is overall very reliable.

The comparison regarding the sub dimensions for each scale is as follows:

Table 1. Sub-Dimension Analysis for “Individual Innovativeness Scale”

	Resistance to change	Opinion-leading	Openness to experience	Risk-taking
Mean	2,48	3,68	3,94	3,29
Standard Deviation	0,59	0,69	0,54	0,83
Minimum	1,00	2,00	1,80	1,00
Maximum	4,63	5,00	5,00	5,00
Total	881	1306	1400	1167

With the respect to Innovativeness Categories the participants are grouped as: 18 participants are in “Innovators”, 4 are in “Laggards”, 151 are in “Early Adaptors”, 151 are in “Early majority” and 31 are in “Late Majority” category.

Table 2. Sub-Dimension Analysis for “Organization Justice Scale”

	Distributive Justice	Interpersonal Justice	Procedural Justice
Mean	3,49	3,68	3,29
Standard Deviation	0,70	0,66	0,72
Minimum	1,00	1,00	1,00
Maximum	5,00	5,00	5,00
Total	1238	1306	1168

Table 3. Sub-Dimension Analysis for “Psychological Empowerment Scale”

	Meaning	Competence	Choice	Impact
Mean	3,99	3,83	3,44	3,65
Standard Deviation	0,54	0,59	0,74	0,66
Minimum	2,67	2,00	1,33	2,00
Maximum	5,00	5,00	5,00	5,00
Total	1418	1361	1223	1295

Among 355 participants that have completed the questionnaire, 161 (45%) have Type A and 194 (55%) are Type B personality trait.

In this study, Two Step structural Model proposed by Anderson and Gerbing (1988) was adopted, so that first Factor Analysis and second Structural Model is tested. Maximum Likelihood method was used and 0.70 factor load criterion proposed by Hair et al. (2006) is adopted. For model to be used in analysis, there are criteria to be fit and parameter values.

Table 4. Significance Tests and Parameters of The Model

Fit Index	Criterion	Identified Fit Value	Result
χ^2 / df	$1 < \chi^2 / df \leq 5$	3,579	Good
RMSEA	$0 \leq RMSEA \leq 0,09$	0,085	Good
CFI	$0 \leq CFI < 1$	0,932	Good
GFI	$0 \leq GFI \leq 1$	0,931	Good

In order to see the profiles of data; mean, median, mode, standard deviation, skewness, kurtosis and CR values are derived with Descriptive Statistics.

Skewness is expected to be normal for values between +3 and -3 according to Tabachnick and Fidell. (2001) where Kurtosis coefficient is also normal for values between +3 and -3. Multivariate value is expected to be close to 10 (Ryan, 1997:133). As stated below all the related values for sub dimensions fit the criteria and accepted as normal.

Table 5. Descriptive Statistics of the Variables

Dimensions	Skewness	Kurtosis	CR
Personality	0,223	0,48	1,844
Procedural	-0,763	0,828	3,184
Interpersonal	-1,012	1,178	4,53
Distributive	-0,607	0,243	0,936
Impact	-0,135	-0,574	-2,206
Choice	-0,145	-0,567	-2,179
Competence	-0,258	-0,241	-0,926
Meaning	-0,323	-0,575	-2,213
Risk Taking	-0,343	-0,611	-2,348
Open to Experience	-0,756	1,152	4,432
Opinion Leading	-0,366	-0,269	-1,034
Resistance to Change	0,386	-0,012	-0,045
Multivariate			8,463

Factor Load Values that determine the dimensions effect on the scale are presented below:

Table 6. Factor Loads of Sub-Factors

Sub-Dimensions	Factor Load
Individual Innovativeness Scale	
Resistance to Change	0,205
Opinion Leading	-0,832
Open to Experience	-0,566
Risk Taking	-0,569
Psychological Empowerment Scale	
Meaning	0,682
Competence	0,76
Choice	0,921
Impact	0,857
Organization Justice Scale	
Distributive	0,607
Interpersonal	0,869
Procedural	0,815

The second phase of the analysis after the measurement model was tested, a second phase of the analysis is conducted with Maximum Likelihood method proposed by Anderson and Gerbing (1988). The Confirmatory factor analysis, path analysis and regression, structural analysis are confirmatory techniques that are used.

The mediating effect of the Psychological Empowerment Bootstrap method is used and 95% bias confidence intervals are analyzed. The criteria and the results for model is as follows:

Table 7. Measurement Model Fit Analysis

Types	Sum of sq.	F	P
Type A	13,76	1,988	0,015
Type B	10,77	0,613	

The meditating role of Organizational Justice is also modeled in the research. It is conducted with SPSS Process macro. The Model is valid with t and F statistics are tested:

Table 8. Model Validity

R	R-sq	F	p
0,4558	0,2078	30,69	0,000

Regarding the Type A and Type B differences ANOVA variance analysis is conducted so that, Type A and Type B difference on individual Innovativeness traits can be analyzed.

Table 9. ANOVA Group Analysis Type A/B

Adaptation Index	Criteria	Adaptation Value	Result
χ^2 / df	$1 < \chi^2 / df \leq 5$	3,953	Good
RMSEA	$0 \leq RMSEA \leq 0,09$	0,09	Good
CFI	$0 \leq CFI < 1$	0,946	Good

4. Findings and Discussion

The results after the validity test for all hypothesis are as follows:

- Type A Personality trait has a positive and significant effect on the Individual Innovativeness, Ho accepted.
- Type A Personality trait has a positive and significant effect on the Psychological Empowerment, Ho accepted.
- Psychological Empowerment has a positive and significant effect on the Individual Innovativeness, Ho accepted.
- In Type A Personality trait positive effect on Individual Innovativeness the Psychological Empowerment has a meditating effect, Ho accepted.
- In Type A Personality trait positive effect on Individual Innovativeness the Organizational Justice do not have a regulating effect, Ho rejected.
- With respect to Anova analysis Type A group has a more positive effect relationship with Individual Innovativeness than Type B.

In this research the relationship between the employees' personality, psychological empowerment, organizational justice and individual innovativeness are investigated. Innovativeness is an important subject since the market trends like "personalization" demand organizations to be quick and proactive. The shortened product life cycles and high standards of customers, result with companies to be innovative.

Although innovativeness seem to be directly related to the investment in technology R&D, but the real source is the people, the employees. A firm's innovativeness is the direct cause of an individual's innovativeness. In that sense factors that motivate people to be more innovative is need to be investigated. Our analysis focuses on employees' personality, perceptions and behaviors.

Also this study is focused on the Turkish ICT sector. Since Tech Companies dominance in the global market is increasing, ICT is the main sectors that has impact on economy. Turkey's development is highly depends on developments and innovativeness of employees in ICT sector. The survey is conducted among 355 white collar workers in Istanbul region in ICT sector firms.

When the innovativeness categories that Hurt et al. (1977) stated is analyzed, the result shows that two categories had exactly same score; the participants where in Early Adaptors and Early Majority category. The literature in global and in Turkey show that mostly the result is in "Early Majority" category (Çuhadar at al., 2013). This shows that our participants are more innovative than the previous result in the literature, which is promising for Turkish ICT&IT sectors and for Turkey respectively.

It was hypothesized that there is a positive relationship between Type A personality trait and Individual Innovations. The result proved this relationship. The reasons for this relationship start with mutual emphasizes on “being goal oriented”. Type A people are goal driven people and Innovativeness process start with defining the goal. Having a goal increases the instinctive motivation, proactiveness and efforts done. Also when the scores are analyzed 161 (45%) participants were Type A and 194 (55%) participants were Type B. When these two different groups were analyzed, Type A people had a more positive relationship with Individual Innovativeness than Type B people have.

Also Psychological Empowerment positive relationship with Individual Innovativeness was also accepted. There were many research result in global and in Turkey that was in favor of this relation, but there were none with IT & ICT sectors were analyzed together. With respect to subfactors, competence, choice and impact's relationship with opinion-leading is the main strong positive relationship. It is meaningful since these psychological empowerment sub factors have a mutual relationship with autonomy which is linked with leadership and opinion-leading factor of Individual Innovativeness.

With respect to Psychological Empowerment interactions, it is also accepted that Psychological Empowerment has a mediating effect on Type A personality trait positive relationship with Individual Innovativeness. In the literature there is evidence of Psychological Empowerments mediating role in Individual Innovativeness increase, but this study makes a contribution to literature by proving psychological empowerments mediating effect on Type A personality trait positive relationship with Individual Innovativeness. (Ertürk, 2012; Iari, 2012). This mediating relationship also shows that, Psychological Empowerment is about perceptions and this is connected with employee's personality. The efforts of the employers are very important but also the employee's personality, meaning his behavior and perceptions, is critical to perceive these psychological empowerment efforts and make an overall judgment.

5. Conclusion and Recommendations

In this study we tried to find the reasons behind individual innovativeness. In order to do this we placed the employees & human factor in the center and tried to find the effects of their personality and perceptions rather than emphasizing on organizational factors like organizational culture, climate and performance. Human factors effect on innovation is crucial. Organizations that seek innovations need to focus on their employee's empowerment and also create conditions that fit with their personality treats as much as investing in technologies, since people that feel that they are valued seem to be showing more effort and having more individual innovativeness.

Organization justice regulatory effect was also analyzed in the study. There were not any evidence for this regulatory relationship and the hypothesis was rejected. There are many findings in the literature that prove organizational justice has a positive relationship Individual Innovativeness (eg. Çelik, 2012; Jašková, 2018). In further studies organizational justice mediating effect on Type A personality trait positive relationship with individual innovativeness can be analyzed. Also in

further researches instead of Type A personality trait, Carl Gustav Jung's Eight Orientations based on his Personality Theory relationship with individual innovativeness can be analyzed. As moderator relationship, organizational trusts relationship with individual innovativeness can also be evaluated. Also this study was conducted in IT & ICT sectors. In further studies these findings can be revisited in different service sectors where employees are in direct contact with customers.

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