Abstract. Innovation, a concept that has been researched in the organizational behaviour literature for almost 30 years, is extremely important for the sustainable success of organizations. In today’s dynamic world along with economic, social and political changes, customer needs and expectations are also changing. The formulas that led a company to success yesterday mean nothing today. Therefore, for companies to continue their existence in an increasingly changing and complex environment, they need to be able to adapt to the speed of this change and even give direction when necessary. Changes occurring in the world require the restructuring of organizations, the way they do business and the quality of the workforce they need to adapt to this change. Undoubtedly, it is the human resource of the organization that will initiate and maintain this change. At this point, human resources is a strategic power for the organization that is as important as the economic and technological power. Having employees with high innovative thinking and behaving skills creates a competitive advantage for companies. There may be many organizational, individual and environmental predictors of innovative behaviours. On the other hand, employees who have enough belief and courage that they can succeed in a job are known to initiate innovations. In other words, the employee’s perception of self-efficacy is necessary for innovative behaviours. In this study, the concept of self-efficacy, which is assumed to be a predictor of innovative behaviours, will be discussed. The concept of self-efficacy, which expresses the effort to set new goals for oneself and to reach these goals with courage, determination and relentlessly, is an extremely important determinant for innovative behaviours. Self-efficacy perception has a very important place in an individual’s job selection, career success and professional progress. Therefore, it is extremely important to know the factors that affect the perception of self-efficacy. In this study, the following question was asked by considering the perception of self-efficacy in the context of personality traits: Is the concept of self-efficacy affected by the personality trait of openness to innovation? This study was carried out in order to answer this question. In this context, the sample of the research consists of 503 people working in various institutions in the public and private sectors. Qualitative research method was used for this study. Perception of general self-efficacy and openness to innovation have been measured with scales whose validity and reliability have been tested in many studies before. The obtained data were analysed by referring to the relevant quantitative analyses (descriptive statistics, reliability, factor and correlation). As a result of the analyses, significant findings were obtained. The findings were evaluated in the context of the relevant literature in the discussion section. Possible research suggestions for future studies are proposed in this section.

Keywords: general self-efficacy, innovation, innovative behaviour innovative personality, openness to innovation.

Introduction. In today’s dynamic world where there is constant change and full of uncertainties, companies need to adapt to the speed and direction of this change in order to gain a sustainable competitive advantage. It is the human resources potential of the organization, which has innovative features, that will ensure this harmony and further guide the change. Generating new ideas, dissemination and implementation is an important performance indicator (Ng and Lucianetti, 2016). Encouraging innovative behaviours is a necessity for almost all sectors and all businesses in today’s world (Damanpour, 1991; Shalley and Gilson, 2004). From this point of view, the fact that the organization’s human resources
that exhibit innovative behaviours is a key factor in yielding strategic superiority for sustainable success. However, it is not enough for employees to have innovative ideas solely. In order for these ideas to be meaningful and valuable, they must be put into practice and the results must be observed. Therefore, organizations that do not want to lag behind change should encourage innovative behaviours. Innovative work behaviour aimed at increasing organizational performance is a complex process involving the generation, introduction and implementation of new ideas. Innovative behaviour plays an important role in responding to changing customer needs and expectations, as well as increasing organizational and individual performance (Li and Zheng, 2014). Employees who have new ideas that will create added value for the organization expect approval and support from their organizations to put these ideas into practice. From this point of view, it is seen that more and more companies encourage their employees for innovative behaviours in order to survive in an environment that is becoming increasingly turbulent and complex (Yidong and Xinxin, 2013). On the other hand, innovation is a feature that not only organizations but also individuals have to develop.

Changes in organizational structures can bring employees face to face with the problem of being unemployed at any time. Therefore, in order to gain a competitive advantage, the employee must be innovative, adapt himself/herself to the conditions of the day, and find fast and creative solutions to the problems he/she encounters (De Jong and Den Hartog 2010). In order to exhibit innovative thoughts and behaviours, individuals should be able to take risks when necessary. From this point of view, the fact that the individual should rely not only on organizational support but also on his/her own resources emerges.

The perception of self-efficacy (PSE), which expresses the belief that an individual can achieve a job and overcome difficulties, when necessary (Bandura, 1983), emerges as an important factor in producing new ideas and exhibiting innovative behaviours. Self-efficacy is a concept that expresses one's thoughts and beliefs about the skills one has. The concept of self-efficacy refers to an individual's belief in his/her own abilities, talents and strength in challenging jobs that require effort and perseverance. Self-efficacy is not only for the challenging tasks encountered in business life, but also refers to the belief that one can cope with the problems encountered in daily life. When considered from this aspect, it can be stated that the concept of self-efficacy is not specific to a certain situation, in other words, it is valid for many situations that the individual may be in Bandura (1977). Even when all reasons are against the individual, the individual's internal readiness for himself/herself, for being able to succeed, for being able to overcome problems, is related to the individual's perception of self-efficacy. The perception of self-efficacy, which is the ability of the individual, who has a certain level of awareness against the opportunities and threats in the environment, to evaluate these opportunities and threats and to direct his/her own internal resources, even if it does not guarantee success, it ensures performance and effort in the work that is believed. Therefore, in the face of the conditions imposed by a constantly changing and uncertain world, self-efficacy emerges as an important concept. In such a world, self-efficacy perception is an important factor in order to be able to cope with difficulties, to exhibit the expected performance, and to adapt to innovations and to initiate innovations when necessary. It is known that individuals with high innovative personality traits are more courageous, entrepreneurial and have original ideas (Bandura, 1977; Guripek et al., 2021). When the studies in the literature are examined, it is seen that there are many studies that reveal the relationship between innovative behaviours and the perception of self-efficacy. This study was carried out to find an answer to the question of whether the perception of self-efficacy is affected by personality traits. In this context, the relationship between openness to innovation as a personality trait and self-efficacy was tested.

**Literature Review.** In the organizational sense, the concept of innovation expresses a process in which new products and services are produced, new processes and technologies are used, the organization is restructured, and new plans and programs are implemented for employees (Damanpour, 1996). While new and applicable ideas are accepted as innovation, the realization of these ideas and their adaptation to business practices in line with the objectives are expressed as innovative behaviour. Innovative behaviour, which is accepted as a key factor for the success of the organization, is defined as
the initiative to voluntarily generate, promote and novel new and useful ideas, products, processes and procedures within the scope of a task, group or organization (De Jong and Den Hartog, 2010; Jain, 2015; Janssen, 2000). Innovative work behaviours generally focus on problems in current working methods, unmet needs of employees and changes in the market (De Jong and Den Hartog, 2008). Trying different ways for existing problems, suggesting new methods, sharing information with other employees can be given as examples of innovative behaviours (Yidong and Xinxin, 2013). Being able to set new goals, believing in success, courage and entrepreneurship are main characteristics that define innovative behaviours (Guripek et al., 2021). And these characteristics are also related to the individual's perception of self-efficacy. The concept of self-efficacy is defined as an individual's belief in his or her own capacity to perform a job (Bandura, 1977). Self-efficacy refers to the belief in the adequacy of the individual's capacity under the current situation and conditions, rather than a possible future capacity when certain conditions are met (Evers et al., 2002). Self-efficacy contributes to the performance of the individual by influencing his/her feelings, attitudes, behaviours and decisions. Expectations for the work done, the desire to solve the problems encountered, the amount of effort to be shown and the determination to struggle in the face of difficulties are the factors that determine the level of self-efficacy (Bandura, 1977; Locke et al., 1986, Newman et al., 2019). Bandura (1977) states that individuals with a high perception of self-efficacy are more patient in the process of seeking solutions when problems arise and they have higher cognitive success levels. Lent et al. (1994) stated in their study that the perception of self-efficacy is a concept that affects the choices of individuals, the effort to be spent for these choices, and the success of the work done (Larson and Borgen, 2006). It is necessary to evaluate self-efficacy not as a fanciful belief in one's own capacity, but as an internal motivation source that transforms existing capacity into a performance that creates added value with effort in line with a goal. Many studies have shown that there is a significant and positive relationship between self-efficacy and performance. In other words, the performance of employees with a high perception of self-efficacy is also high (Bandura, 1977; Clercg et al., 2018; Judge et al., 2008; Lee and Ko, 2010; Locke et al., 1984; McDonald and Siegall 1992; Orpen, 1995; Rubbers et al., 2005). Another important factor affecting people’s choices, attitudes, behaviours and even success is personality. McCrae and Costa (1999) defined personality as a continuous, interpersonal, emotional, motivational and experiential style of interaction that explains the behaviour of the individual in different situations (Dogan, 2013). While personality traits explain the reasons underlying the attitudes and behaviours of individuals, they also play an important role in how these attitudes and behaviours are directed. Therefore, it can be stated that personality traits are an important determinant of the behaviours exhibited by individuals in organizational processes and social lives (McCrae and Costa, 1997; 1987). The five-factor personality traits model, which is built on the trait approach in the evaluation of personality traits, is one of the frequently used methods (Digman, 1990; McCrae and Costa, 1997). According to this method, personality traits are expressed through the adjectives that individuals use to describe both themselves and other individuals (Dogan, 2013). McCrae and Costa (1987), one of the theorists who adopt the traits approach, made versatile measurements for large audiences with the behaviour variables they called factors in their study. As a result of the evaluation of their findings, they revealed that personality traits are classified under five factors (Cervone and Pervin, 2013). Within the scope of the purpose of this study, only the openness to innovation (OI) dimension of the five factor personality traits will be evaluated. The dimension of openness to innovation, which means being open to new experiences, is a dimension that expresses individuals’ willingness to accept new thoughts and ideas, mental curiosity, multidimensional thinking and imagination. Individual with a high degree of openness to innovation tend to constantly renew themselves and develop their abilities and skills in line with their goals in order to achieve superior success in working life (McCrae and Costa, 1987; 1997; Merdan, 2013). On the other hand, individuals with low openness to innovation are more traditional individuals who adhere to traditions, do not stray from the routine rather than trying something new, prefer to continue their habits and prefer the familiar (Burger, 2016; McCrae and Costa, 1987; 1997; 1999). While personality reveals what the individual's natural
characteristics are, self-efficacy is related to how he or she directs his behaviors while interacting with the environment (Bandura, 1977; Fosse et al., 2015; Mc Crae and Costa, 1999).

Perception of self-efficacy has the function of directing the attitudes and behaviors of individuals in their interactions with the environment through cognitive, emotional, and motivational processes (Bandura, 1983). Personality traits can be assumed as a driving force in the development of self-efficacy (Larson and Borgen, 2006). If self-efficacy affects the decision to perform an activity, the effort spent for that activity, and the success to be achieved as a result of the effort, personality traits can also affect the relationships between them (Larson and Borgen, 2006). Guripek et al. (2021) stated that self-efficacy is a feature found in employees with innovative personality. It is seen that the relationship between self-efficacy and innovativeness is generally explained through risk-taking.

Since innovation involves acting and being different from the current situation, it also includes risk. Therefore, the concept of self-efficacy comes to the fore in situations where uncertainty such as innovative work behavior is high and the individual needs to be self-confident for success (Turgut and Sokmen, 2018). In order to be innovative, it is necessary not to be afraid of failure and to take risks. It is assumed that the perception of self-efficacy will enable people to initiate innovations in the organizational field and take the right actions by taking risks under uncertainty since they believe that they can cope with the problems that will arise in every field (Basım et al., 2008). Ozkan (2017), in his study examining the effect of employees' self-efficacy levels on innovative and creative behaviors, concluded that the perception of self-efficacy has a positive and significant relationship on innovative behaviors. In her study, Fırın (2020) found that individuals with high openness to innovation are willing to generate new ideas and put these ideas into practice. In addition, it has been determined that these employees have a strong belief that they can affect their work. On the other hand, Rottinghaus et al. (2002) and Nauta (2004), in their study examining 6 dimensions of self-efficacy and five-factor personality traits, concluded that openness to innovation dimension of personality is positively related to all dimensions of self-efficacy. Basım et al. (2008), in their study investigating the effect of employees' self-efficacy perceptions on innovation and risk-taking, found that individuals with high self-efficacy are more innovative and able to take risks compared to those with low self-efficacy.

Based on the literature, is there a correlation between the personality's openness to innovation dimension and the perception of self-efficacy? This study was carried out to answer the question.

Methodology and research methods. This study aims to find an answer to the question of whether there is a correlation between the dimension of personality's openness to innovation and self-efficacy. For this purpose, the data needed were collected from the employee sample through the questionnaire form. The questionnaire form includes the scales measuring self-efficacy and openness to innovation and demographic information. Psychometric properties of the relevant scales were tested previously in many empirical studies. In this study, quantitative research methods were used. Under the title of the literature review, the theoretical background of this study is discussed. Based on this theoretical background, the hypothesis of the research was established as follows:

H1: There is a positive correlation between self-efficacy and openness to innovation.

The sample of the research consists of people with at least undergraduate education who work in various jobs and positions in the public and private sectors in the provinces of Bolu and Sakarya in Turkey. The distribution of the questionnaires was carried out in two ways, online and hardcopy (paper-pen method). 503 of the 570 returned questionnaires were evaluated.

To measure the general self-efficacy perceptions of the participants, a 10-item general self-efficacy scale developed by Schwarzer and Jerusalem (1995) and adapted into Turkish (Aypay, 2010) was used with a five-point Likert-type response scale (1 – definitely disagree, 5 – definitely agree). The scale tests individuals' internal readiness for their ability to cope with difficult tasks, new tasks, or unusual situations. The Turkish version of the scale's psychometric properties was found acceptable (Aypay, 2010). A sample item is «When I encounter a problem, I can usually find several solutions».
The second scale was taken from the 44-item Five-Factor Personality Traits scale, developed by Benet-Martinez and John (1998) and adapted into Turkish (Sumer et al., 2005), consists of statements measuring the personality trait sub-dimension of openness to innovation. The scale is consisted of 10 items. The scale was used on a five-point Likert type response scale (1 – definitely disagree, 5 – definitely agree). A sample item is «I am original, I generate new ideas». Since the scales were used and tested for validity in many scientific studies, no validity analysis was performed, only reliability analysis was performed.

Results. Table 1 presents the overview of the demographic characteristics of the participants. 51.9% (n = 261) of the participants were female and 48.1% (n = 242) were male. 51.3% (n = 258) of the participants have undergraduate, 37.2% (n = 187) graduate and 11.5% (n = 58) doctoral education. 49.7% (n = 250) of the participants work in the public sector and 50.3% (n = 253) work in the private sector. Of the participants, 8.2% (n = 41) are senior managers, 24.7% (n = 124) are middle-level managers, 8.2% (n = 41) are lower-level managers and 59%, (n = 297) are in non-managerial positions.

Table 1. Demographic characteristics of the participants

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>261</td>
<td>51.9</td>
</tr>
<tr>
<td>Male</td>
<td>242</td>
<td>48.1</td>
</tr>
<tr>
<td>Marital Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>226</td>
<td>44.9</td>
</tr>
<tr>
<td>Married</td>
<td>277</td>
<td>55.1</td>
</tr>
<tr>
<td>Education Level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Undergraduate</td>
<td>258</td>
<td>51.3</td>
</tr>
<tr>
<td>Graduate</td>
<td>187</td>
<td>37.2</td>
</tr>
<tr>
<td>Ph.D. (Doctorate)</td>
<td>58</td>
<td>11.5</td>
</tr>
<tr>
<td>Sector</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public</td>
<td>250</td>
<td>49.7</td>
</tr>
<tr>
<td>Private</td>
<td>253</td>
<td>50.3</td>
</tr>
<tr>
<td>Position</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Senior Manager</td>
<td>41</td>
<td>8.2</td>
</tr>
<tr>
<td>Middle-Level Manager</td>
<td>124</td>
<td>24.7</td>
</tr>
<tr>
<td>Sub-Tier Manager</td>
<td>41</td>
<td>8.2</td>
</tr>
<tr>
<td>Non-Administrative Staff</td>
<td>297</td>
<td>59</td>
</tr>
</tbody>
</table>

Sources: developed by the authors.

Internal Consistencies, Factor analysis and Descriptive statistics. First off, all reliability scores of the scale have been calculated, and all scales scored higher than .70. A confirmatory factor analysis (CFA) has been performed to test the factor structure. The explained variance rate of each scale is expected to be between 40% and 60% and the factor loadings of the expressions are expected to be over 30%. Thus, it can be said that the scales accurately measure the desired structure. Since the KMO value of the Self-Efficacy scale is 0.921 and p<0.05, it is seen that the scale is suitable for factor analysis. According to the factor analysis results, the general self-efficacy scale has a single factor structure. The explanatory variance rate of the scale was found to be 50.14%. The factor loads of the questions vary between (0.563) and (0.811). The explained variance rate of the scale of openness to innovation was found to be 40.66%. Since the KMO value of the openness to innovation scale is 0.830 and p<0.05, it is seen that the scale is suitable for factor analysis. The scale is consisted of single-factor structure. The explanatory variance rate of the scale was found to be 40,66%. The factor loads of each item of the scale varies from (0,555) and (0,701).
Table 2. Descriptive statistics and internal consistencies

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Mean±Sd</th>
<th>Min-Max (Median)</th>
<th>Skewness</th>
<th>Kurtosis</th>
<th>α</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSE</td>
<td>3.9±0.55</td>
<td>1.1-5 (3.9)</td>
<td>-1.052</td>
<td>3.682</td>
<td>.89</td>
</tr>
<tr>
<td>OI</td>
<td>3.81±0.55</td>
<td>2.1-5 (2.89)</td>
<td>-0.038</td>
<td>-0.107</td>
<td>.81</td>
</tr>
</tbody>
</table>

Sources: developed by the authors.

Pearson correlation analysis was performed because the data had a normal distribution and it was questioned whether there was a relationship between the variables, and then linear regression analysis was performed to measure the degree of this relationship. SPSS 22 package program was used for analyses. The results obtained from the analyses are detailed as follows:

Table 3. Correlation Findings

<table>
<thead>
<tr>
<th>Indicators</th>
<th>PSE</th>
<th>OI</th>
</tr>
</thead>
<tbody>
<tr>
<td>OI</td>
<td>0.339 **</td>
<td>-</td>
</tr>
<tr>
<td>PSE</td>
<td>-</td>
<td>0.339 **</td>
</tr>
</tbody>
</table>

Note. N = 503. ** p < .001
Sources: developed by the authors.

As seen Table 3, there is a positive correlation between self-efficacy perception and openness to innovation (p<0.001). According to this correlation analysis, H1 was accepted. It was found according to the linear regression analysis (R²=.115) performed to measure the degree of this relationship. In other words, according to this result, innovative personality trait explains the perception of self-efficacy by 11.5%. This value is too low to make a sense.

Conclusion: When the results of the analyses are examined, it is seen that there is a positive and significant correlation between the personality's openness to innovations and the perception of self-efficacy. Because individuals with a high degree of openness to innovation tend to constantly renew themselves to achieve high success in the work, they do in working life, and constantly improve their abilities and skills in line with their goals (Merdan, 2013). Therefore, it can be stated that personality is an important factor in individuals being open to new experiences, learning new things, and willingness to take risks (Larson and Borgen, 2006). As a matter of fact, social cognitive career theory states that individual factors such as personality affect career self-efficacy by influencing individuals' learning experiences (Nauta, 2004). Therefore, it can be stated that the perception of self-efficacy is a concept affected by personality traits. As a matter of fact, Lent et al. (1994) assumed personality as a driving force in the acquisition of self-efficacy, that is, they stated that personality develops before the perception of self-efficacy. Although Bandura did not mention personality traits as the predictor of self-efficacy while defining self-efficacy, studies show that personality structure is also a determinant of self-efficacy perception (Basım et al., 2008; Hamzadayı and Buyukkiz, 2015; Larson and Borgen, 2006; Nauta, 2004; Rottinghaun, 2002). It is a fact that the innovative personality can provide benefits to the business in various subjects such as supplying new products, benefiting from new production techniques, acquiring new customers and markets, and finding new service methods. When the literature is examined, it is seen that there is a positive relationship between the personality's openness to innovation and innovative work behaviours (Chen et al., 2010; McCare and Costa, 1999; Madrid et al., 2014). The individual who comes with a new idea expects support from the organization for the promotion and implementation of this idea (Van der Vegt and Janssen, 2000). As a matter of fact, ideas that are not reflected in practice do not make sense in practice. Therefore, in order for these innovative ideas to turn into performance, organizations should encourage their employees by creating a structure that will support innovative ideas. Innovating requires not only having the necessary knowledge, skills, and equipment, but also individual courage. Courage is a feature shaped by an individual's perception of self-efficacy (Guripek et al., 2021). Individuals
with high self-efficacy are more innovative and risk-taking compared to those with low self-efficacy. Considering that today's organizations need employees with these qualifications, it can be stated that the practices of organizations to increase the self-efficacy of their employees will positively affect the performance of both the individual and the organization. Individuals with high self-efficacy, who are confident in their abilities, do not hesitate to take action, and know how to overcome the problems they encounter with determination, will have a more positive view of new ideas and will tend to make more innovations in the organizational field (Basım et al., 2008). As a result, it can be said that it is extremely important for a successful performance that individuals believe in themselves as much as they are qualified. Therefore, organizations must enhance self-efficacy of employees. Organizations that want to improve self-efficacy of their employees have to pay enough attention to empowerment, tolerating unintentional mistakes, having an effective performance evaluation and reward system, and having procedures to meet the need for appreciation, approval and recognition of employees.

As with any study, this study also had some limitations. First limitation is that the sample of the research did not focus on a specific sector and occupational group. Comparative analyses can be made by focusing on specific sectors and employee groups in later studies. In this study, only the concept of general self-efficacy and the dimension of openness to innovation from five-factor personality traits were discussed. It has been seen that there are very few studies in the literature that deals with the concept of personality traits and self-efficacy together. More empirical studies are needed in this field.

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