From Creativity to Innovation: The Role of Female Employees’ Psychological Capital

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Abstract - This study aimed to measure the effect of psychological capital and individual creativity on employee individual innovation behavior of the female employees of a manufacturing industry in Tangerang. In this study, individual creativity is mediating variable. Data was collected from 277 returned questionnaire of samples taken by random sampling. Data was analyzed using SEM method with SmartPLS 3.0 software. The results of this study showed that psychological capital had a significant effect on individual creativity, psychological capital and individual creativity have a significant effect on individual innovation behavior, individual creativity have a positive and significant effect on the relationship between psychological capital and individual innovation behavior. Individual creativity functioned as a partial mediator. This new research proposed a model for managing the individual innovation behavior among the female employees of the manufacturing industry in Tangerang through developing psychological capital with individual creativity as a mediator. This research could pave the way to improve employee readiness in facing the era of industrial revolution 4.0.

Keywords: Individual creativity; individual innovative behavior; industrial revolution 4.0; psychological capital.

I. INTRODUCTION

Innovation is a desired goal for a successful modern company. Most companies and organizations recognize the need to be proactive in their efforts to “find” or be innovative. No exception manufacturing industry organizations. Although there is a great deal of literature on innovative behavior in general, very little research has been done on the unit of analysis for female employees called the manufacturing industry (Masduki Asbari, Pramono, Kotamena, Liem, Sihite, et al., 2020; Sutardi et al., 2020; Yuwono, Novitasari, et al., 2020; Yuwono, Wiyono, et al., 2020). Therefore, more research is needed on the potential factors associated with innovative behavior from the perspective of female employees in research in the manufacturing industry (M Asbari et al., 2020; Masduki Asbari, Chi Hyun, et al., 2020; Masduki Asbari, Fayzhall, et al., 2020; Masduki Asbari, Hyun, et al., 2020; Masduki Asbari, Pramono, Kotamena, Liem, Alamsyah, et al., 2020; Basuki et al., 2020; Fayzhall et al., 2020; Goestjahjanti et al., 2020; Purwanto et al., 2020; Santoso et al., 2020; Zaman et al., 2020). However, it is important to note that, although creativity is used synonymous with innovation, in this study the concept of creativity is separated from the concept of innovative behavior.

For the above reasons, this study has three objectives. First, the aim and overall contribution is to study innovative behavior from the perspective of female employees using industrial manufacturing organizations. Second, according to the literature, innovative behavior is influenced by personal characteristics (Kim & Park, 2015). This study discusses two personal characteristics, namely employee creativity and psychological capital. According to Yu et al. (2019) only a few studies have attempted to determine the impact of psychological capital on employee creativity in the workplace context. In particular, this study examines whether and how the influence of psychological capital is associated with individual female employees' creativity and innovative behavior. By focusing on these three constructs, the study contributes to the relatively little research domain of female employee innovation performance in the manufacturing industry. This research report is structured as follows. First, the conceptual model is briefly
described. Second, content and relationships between concepts are discussed. Third, methods, statistical analysis and empirical hypothesis test results are presented. The last section contains the overall conclusions of this study.

A. Individual Innovative Behavior

According to Fuglsang, innovation is a difficult phenomenon to define and study, and there is no consensus on how to define innovation (Fuglsang, 2010). One of the earliest definitions of innovation was the Schumpeter definition (Schumpeter, 2008). Schumpeter calls innovation a 'new combination' of services, work processes, products and markets (Fritsch, 2017; Schumpeter, 2008). In literature, innovation can refer to a new product or service, a new production process, or a new administrative structure or system (Asbari et al., 2021; Fikri et al., 2020; Hutagalung et al., 2020; Novitasari, Kumoro, et al., 2020; Novitasari, Yuwono, et al., 2020; Suprapti et al., 2020). These different definitions of innovation show the various potential differences between different types of innovation. Simply put, innovation can be realized anywhere in an organization. However, this study limits its focus to innovations relevant to individual female employees. The type of innovation evaluated in this study is the innovative behavior of individuals in the manufacturing industry. Individual innovative behavior regarding the implementation of innovation that has the potential to benefit employee performance.

Individual innovative behavior is related to employee behavior and their ability to adopt and use new and useful ideas in their work environment (Agistiwati et al., 2020; Hutagalung et al., 2020; Novitasari, Kumoro, et al., 2020; Suprapti et al., 2020). Thus, the individual's innovative behavior does something new that represents a change in behavior or a discontinuity relative to the usual patterns of organizational behavior in the past. Consequently, the domain of individual innovative behavior is linked to day-to-day employee practices. Such innovation is implicitly a function of learning and knowledge creation, which is integrated into daily work practices (Avby & Kjellström, 2019). Additionally, there is no explicit focus on implementation timing. Innovations can be implemented either as a one-time change (for example for conditional improvement in certain situations) or more permanently (for example, a new extended procedure for all production processes). Innovation in a one-time situation is analogous to the literary term ad hoc innovation (Gallouj & Weinstein, 1997). Similar to ad hoc innovation, the individual's innovative behavior may include some transient innovations. However, the concept of individual innovative behavior can include several elements that can be repeated in new situations, to be implemented and generalized on a more permanent basis (Toivonen et al., 2007). Consequently, the concept of individual innovative behavior in this study is open to various changes that are relevant to employee performance. Thus, individual innovative behavior embraces and reflects a specific form of change-oriented activity (Battistelli et al., 2013), which is explicitly shown to employees in the implementation of new ideas and useful in a job role.

B. Individual Creativity

As shown in the conceptual model in Figure 1, individual creativity is one of the two personal characteristics mentioned to impact an individual's innovative behavior. Individual creativity as a personal characteristic reflects the idea that creativity is heterogeneous and distributed across individuals in the organization. Creativity is flexible and dynamic and varies from employee to employee. Therefore, individual creativity is a resource or individual ability to create (Agistiwati et al., 2020; Asbari & Novitasari, 2020; Maesaroh et al., 2020; Novitasari, Kumoro, et al., 2020; Suprapti et al., 2020; Sudiyono et al., 2020). Based on this, and specifically for this study, individual creativity is defined as an individual employee effort in producing new things, useful ideas or problem solutions. (Amabile et al., 2005). Individual creativity refers to the process of making ideas or solving problems and actual ideas or solutions (Amabile et al., 2005). Creativity is sometimes used synonymously with innovation. However, in this study, the authors separate the concept of individual creativity from individual innovative behavior. Shalley et al. (2004) supports this distinction, stating that it is "important to distinguish creativity from innovation". Creation refers to the development of novel, potentially useful ideas. Although employees may share these ideas with others, it is only when they are successfully implemented at the organizational or unit level that they are considered innovations (Shalley et al., 2004). As the definition above suggests, individual creativity refers to the production and development of new and potentially useful ideas, consequently, individual creativity...
describes individual cognitive processes and thinking (refers to creative thinking) and potential related activities such as (1) defining the problem to be solved, (2) gathering information, (3) generating ideas and (4) evaluating ideas (Mumford et al., 1991). In contrast to individual creativity, the concept of individual innovative behavior is related to behavior, which specifically refers to the behavioral implementation of creative ideas. Consequently, there is a natural difference between individual creativity and individual innovative behavior, even though the two concepts are closely related or interrelated.

Creativity is most often described as the need to 'put in' for innovation. Slåtten & Mehmetoglu (2015) emphasizes the importance of creativity, characterizing it as the “ultimate source” of innovative behavior. Gilmartin (1999) illustrates the importance of creativity by describing it as a “fuel for innovation”. This is because "the basis of the idea of innovation is creativity" as stated by Van de Ven (1986). Previous research has found a positive relationship between creativity and innovation at the individual level (Slåtten & Mehmetoglu, 2015). In line with previous research, this study looks for a positive relationship between individual creativity and individual innovative behavior. Therefore the first hypothesis of this study is as follows:

Hypothesis 1: Individual creativity has a significant effect on innovative behavior.

C. Psychological Capital

The psychological capital in Figure 1 is the second personal characteristic that can influence an individual's innovative behavior (Purwanto et al., 2021). Psychological capital construction is taken from positive psychology, and attention to "who you are" as a person (Luthans et al., 2007a). More precisely, psychological capital focuses on the positive aspects and strengths of individuals and labels them collectively as positive psychological sources for innovative processes (Luthans et al., 2007b). Luthans et al. (2007b) describe psychological capital as a construct that includes four first-level positive psychological resources: (i) hope, (ii) self-efficacy, (iii) resilience (resilience) and (iv) optimism (Luthans et al., 2007b). The dimension of hope in psychological capital is a motivational state that describes the extent to which a person can progress when facing obstacles. Self-efficacy is an individual's belief in someone, in the form of "the ability to perform tasks successfully". Resilience (resilience) refers to the ability to manage setbacks, pursue goals, and achieve good results. Optimism is a positive assessment of the future (Luthans & Youssef-Morgan, 2017).

Previous research has linked individual psychological capital to work-related performance, including individual innovative behavior. For example, Slåtten et al. (2019) found that psychological capital among employees was positively related to innovative behavior. In another study, we found a positive relationship between psychological capital and innovative performance as rated by supervisors among employees employed in various fields (Abbas & Raja, 2015). In line with most of the previous research, psychological capital is expected in such a construct "to provide the necessary storehouse of psychological resources which help effectively innovative work-related ideas." (Abbas & Raja, 2015). Based on this, the second hypothesis of this study is proposed as follows:

Hypothesis 2: Psychological capital has a significant effect on innovative behavior.

Although psychological capital has been suggested to have a direct impact on the innovative behavior of individuals, it is also reasonable to assume that psychological capital has an additional direct impact on individual creativity. Previous research has revealed that individual creativity is linked to personal factors (Slåtten et al., 2019). In this study, psychological capital reflects these individual factors. In particular, psychological capital is expected not to be limited to its positive impact on individuals, but also to trigger individuals to be more creative. It is important to remember that individual creativity in the preceding discussion is described in terms such as "primary source" (Slåtten & Mehmetoglu, 2015) and the "foundation of innovation" (Van de Ven, 1986). In simple terms it can be said that, without creative thinking, no innovative behavior will occur. Gilmartin (1999) supports this assumption, stating, "creativity is the basic building block of discovery and innovation".

Each of the four sources of psychological capital is a potential provider and helps enhance individual creativity. Creative thinking is not a quick solution, but it can involve extensive and intensive cognitive and
mental work. It is reasonable to assume that the mental labor of individual creativity requires some form of a learning process of at least four steps. First, one must be aware of the problem or challenge that needs to be resolved. Second, one must be interested and motivated to explore the nature of the problem ("what is the real problem to be solved here?"). Third, identify potential solutions. In this section, there may be several and sometimes even seemingly contradictory solutions, each with specific obstacles. Fourth, among the list of alternative solutions, one must ultimately evaluate and identify the most appropriate and practical solution. Based on the four-step process of individual creativity, it is easy to imagine that individual creativity is a relatively demanding mental / cognitive process that can be frustrating, time consuming and stressful. However, a person's psychological capital resources can increase their creativity. Psychological capital is a core resource for achieving individual creativity because it is represented by a positive assessment of the circumstances and the likelihood of success based on motivated and diligent efforts. It is easy to imagine that individual creativity is a relatively demanding mental / cognitive process that can be frustrating, time consuming and stressful. However, a person's psychological capital resources can increase their creativity. Psychological capital is a core resource for achieving individual creativity because it is represented by a positive assessment of the circumstances and the likelihood of success based on motivated and diligent efforts. It is easy to imagine that individual creativity is a relatively demanding mental / cognitive process that can be frustrating, time consuming and stressful. However, a person's psychological capital resources can increase their creativity. Psychological capital is a core resource for achieving individual creativity because it is represented by a positive assessment of the circumstances and the likelihood of success based on motivated and diligent efforts. It is easy to imagine that individual creativity is a relatively demanding mental / cognitive process that can be frustrating, time consuming and stressful. However, a person's psychological capital resources can increase their creativity. Psychological capital is a core resource for achieving individual creativity because it is represented by a positive assessment of the circumstances and the likelihood of success based on motivated and diligent efforts (Luthans et al., 2007a).

Previous research has revealed that four sources or "ingredients" of psychological capital, both individually and collectively, are associated with individual creativity (Rego et al., 2012). For example, previous research has linked the expected source of psychological capital with a person's desire for creative exploration (Luthans & Youssef-Morgan, 2017). The study explicitly states that hopeful employees will "tend to be creative" (Luthans & Youssef-Morgan, 2017). Likewise, in terms of optimism Rego et al. (2012) found that optimistic people tend to be more creative than their less optimistic counterparts. Research on two other sources of psychological capital, self-efficacy and resilience, has also found that they are positively related to aspects of creativity (Cohler, 1987; Tierney & Farmer, 2002). So, in conclusion, the four sources of psychological capital are all potentially linked to individual creativity. Based on previous research it is expected that the four dimensions of psychological capital will be positively related to the individual creativity of female employees. The assumptions about this relationship can be summarized in the third hypothesis of this study, namely as follows:

**Hypothesis 3**: Psychological capital has a significant effect on individual creativity.

Hypothesis 2 and hypothesis 3 above state that psychological capital has a direct impact on employees' innovative behavior and individual creativity. However, as shown in the research model, it is also expected that the relationship between psychological capital and individual innovative behavior is mediated by individual creativity. This assumption is a third alternative in which psychological capital can be linked to individual innovative behavior. The main argument for this third route of impact is in the core role that individual creativity appears to have in individual innovative behavior. As emphasized above, individual creativity in the literature is described as the "primary source." (Slåtten & Mehmetoglu, 2015) and the "foundation of innovation" (Van de Ven, 1986). Hini implies that from the perspective of individual employees, individual creativity is a necessary prerequisite for individual innovative behavior. Based on the core role of individual creativity, the increased individual creativity of employees due to their psychological capital can encourage employees to experiment and apply creative ideas, if they see benefits for their work. As a result, individual creativity is expected to mediate between psychological capital and individual innovative behavior. Therefore, the fourth hypothesis in this study is as follows:

**Hypothesis 4**: Psychological capital has a significant effect on innovative behavior through individual creativity as a mediator.

**D. Research Framework**
According to Sekaran & Bougie (2003) theoretical framework is the foundation on which the entire research project is based. From the theoretical framework can be formulated hypotheses that can be tested to determine whether the theory formulated is valid or not. Then then further it will be measured by appropriate statistical analysis. Referring to previous theory and research, there is a relationship between the following variables: psychological capital which refers to the research parameters Luthans & Youssef-Morgan (2017), individual creativity refers to the research parameters George & Zhou (2001) and innovative behavior refers to research parameters Janssen (2000) and Scott & Bruce (1994). For this reason, the authors build a research model as shown in Figure 1 below:

II. METHODS

A. Operational Definition of Variables and Indicators

The method used in this research is quantitative method. Data was collected by distributing questionnaires to all female employees of a manufacturing company in Tangerang. The instrument used to measure psychological capital adapted from Luthans & Youssef-Morgan (2017) using 4 items (X1-X4). Psychological capital is defined as a state of positive psychological development of a person characterized by self-efficacy, optimism, hope and resilience (Luthans & Youssef-Morgan, 2017). Variable psychological capital This is explained in four items, namely: (X1) “I feel confident that I can set goals for myself in my work area”; (X2) “I am optimistic about my future in this organization”; (X3) “When faced with a challenge in my work, I can find an alternative solution to it”; (X4) “I can find an alternative way to reach my goal”. Individual creativity instruments adapted from George & Zhou (2001) using 2 items (Z1-Z2). Individual creativity is defined as generate/produce new ideas, useful ideas, or problem solutions from each employee. This idea includes the process of making ideas and actual ideas (George & Zhou, 2001). This individual creativity variable is described in two items, namely: (Z1) “I contribute creative ideas to solve challenges in my work”; (Z2) “I contribute creative ideas to improve the quality of my work”. Instrument innovative behavior adapted from Janssen (2000) and Scott & Bruce (1994) using 5 items (Y1-Y5). Innovative behavior (individual) is defined as Employee behavior and its ability to adopt and use new and useful ideas in their work (Janssen, 2000; Scott & Bruce, 1994). This individual innovative behavior variable is described in five items, namely: (Y1) “I create new ideas to solve problems in my work”; (Y2) “I am looking for new work methods or techniques to complete my work”; (Y3) “I investigate and find ways to apply my ideas”; (Y4) “I promote my ideas so that others can use them in their work”; (Y5) “I try new ideas in my work”. The research model can be seen as in Figure 1. The questionnaire is designed closed except for questions / statements about the identity of the respondent in the form of a semi-open questionnaire. Each closed question / statement item is given five answer options, namely: strongly agree score 5, agree score 4, neutral score 3, disagree score 2, and strongly disagree score 1. The method for processing data is by using PLS and using SmartPLS version 3.0 software as a tool.

B. Population and Sample

The population in this study are permanent employees from one of the manufacturing industries in Tangerang, amounting to 305 people. The questionnaire was distributed using simple random sampling technique. The results of the questionnaire returned were 277 samples. So the sample size is 90.8% of the total population.
III. RESULTS

A. Sample Description

A total of 277 female employees participated. They have different age groups, ranging from under the age of 29 years (246%), 30-49 years (48%), and over 50 years of age (28%). Their employment status varies, of which 38% are permanent employees, 62% of whom are contract employees. The length of their work also varies, 34% of them are under 5 years, 50% have worked between 5-10 years, and the remaining 16% have worked for more than 10 years. The highest education level of the respondents is the majority at high school level (SMA / SMK), namely 75%, and the remaining 23% are junior high school graduates and 2% undergraduate graduates.

Table 1. Sample Description

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Qty.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;29 yrs.</td>
<td>66</td>
<td>24%</td>
</tr>
<tr>
<td>30-49 yrs.</td>
<td>133</td>
<td>48%</td>
</tr>
<tr>
<td>&gt; 50 yrs.</td>
<td>78</td>
<td>28%</td>
</tr>
<tr>
<td>The period of service as an employee</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;5 yrs.</td>
<td>94</td>
<td>34%</td>
</tr>
<tr>
<td>5-10 yrs.</td>
<td>139</td>
<td>50%</td>
</tr>
<tr>
<td>&gt; 10 yrs.</td>
<td>44</td>
<td>16%</td>
</tr>
<tr>
<td>Highest diploma</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Junior High</td>
<td>64</td>
<td>23%</td>
</tr>
<tr>
<td>High school</td>
<td>208</td>
<td>75%</td>
</tr>
<tr>
<td>≥ S1</td>
<td>5</td>
<td>2%</td>
</tr>
</tbody>
</table>

Source: Processed Data (2021)

B. Test Results of the Validity and Reliability of Research Indicators

The measurement model testing stage includes testing for convergent validity, discriminant validity. Meanwhile, to test the construct reliability, Cronbach’s alpha and composite reliability were used. The results of the PLS analysis can be used to test the research hypothesis if all indicators in the PLS model have met the requirements of convergent validity, discriminant validity and reliability testing.

1. Convergent Validity Testing

Convergent validity test is done by looking at the loading factor value of each indicator against the construct. In most references, a factor weight of 0.7 or more is considered to have sufficiently strong validation to explain latent constructs (Chin, 1998; Ghozali, 2014; Hair et al., 2010). In this study, the minimum limit for the accepted loading factor is 0.7, and provided that the AVE value of each construct is ≥ 0.5 (Ghozali, 2014). After going through SmartPLS 3.0 processing, all indicators have a loading factor value above 0.7 and an AVE value above 0.5. The fit or valid model of this study can be seen in Figure 2. Thus, the convergent validity of this research model has met the requirements. The value of loadings, Cronbach's alpha, composite reliability and AVE for each complete construct can be seen in Table 2.

2. Discriminant Validity Testing

Discriminant validity done to ensure that each concept of each latent variable is different from other latent variables. The model has good discriminant validity if the AVE squared value of each exogenous construct (the value on the diagonal) exceeds the correlation between that construct and other constructs (values below the diagonal) (Ghozali, 2014). The results of discriminant validity testing are by using the AVE square value, namely by looking at the Fornell-Larcker Criterion Value obtained as shown in Table 3. The results of the discriminant validity test in table 3 above show that all constructs have an AVE square root value above the correlation value with other latent constructs (via Fornell-Larcker criteria). Likewise, the cross-loading value of all items from an indicator is greater than the other indicator items as mentioned in Table 4, so it can be concluded that the model has met discriminant validity (Fornell & Larcker, 1981).

Furthermore, a collinearity evaluation is conducted to determine whether there is a collinearity problem in the
model. To find the collinearity, the collinearity VIF statistic of each construct is needed. If VIF is more than 5, then the model has collinearity (Hair et al., 2014). As shown in Table 4, all VIF scores are less than 5, i.e., the result of the structural collinearity model reveals the VIF value below 2. This indicates that this research model does not have a multicollinearity problem.

3. Construct Reliability Testing

The construct reliability can be assessed from the Cronbach’s alpha value and the composite reliability of each construct. The recommended composite reliability and Cronbach’s alpha values are more than 0.7 (Ghozali, 2014). The results of the reliability test in Table 2 above show that all constructs have composite reliability and Cronbach’s alpha values greater than 0.7 (> 0.7). In conclusion, all constructs have met the required reliability.

Table 2. Items Loadings, Cronbach’s Alpha, Composite Reliability, and Average Variance Extracted (AVE)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Items</th>
<th>Loadings</th>
<th>Cronbach’s Alpha</th>
<th>Composite Reliability</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychological Capital (X)</td>
<td>X1</td>
<td>0.938</td>
<td>0.931</td>
<td>0.951</td>
<td>0.831</td>
</tr>
<tr>
<td></td>
<td>X2</td>
<td>0.955</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>X3</td>
<td>0.930</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>X4</td>
<td>0.815</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individual Creativity (Z)</td>
<td>Z1</td>
<td>0.975</td>
<td>0.948</td>
<td>0.975</td>
<td>0.950</td>
</tr>
<tr>
<td></td>
<td>Z2</td>
<td>0.975</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Innovative Behavior (Y)</td>
<td>Y1</td>
<td>0.825</td>
<td>0.906</td>
<td>0.930</td>
<td>0.728</td>
</tr>
<tr>
<td></td>
<td>Y2</td>
<td>0.894</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Y3</td>
<td>0.855</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Y4</td>
<td>0.890</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Y5</td>
<td>0.798</td>
<td></td>
<td></td>
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</table>

Source: SmartPLS 3.0 Processing Results (2021)

Table 3. Discriminant Validity

<table>
<thead>
<tr>
<th>Variables</th>
<th>X</th>
<th>Y</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychological Capital (X)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individual Creativity (Z)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Innovative Behavior (Y)</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

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### Table 4. Collinearity Statistics Individual Creativity (VIF)

<table>
<thead>
<tr>
<th>Variables</th>
<th>X</th>
<th>Y</th>
<th>Z</th>
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</thead>
<tbody>
<tr>
<td>Psychological Capital (X)</td>
<td>1.780</td>
<td></td>
<td>1.000</td>
</tr>
<tr>
<td>Innovative Behavior (Y)</td>
<td></td>
<td>1.780</td>
<td></td>
</tr>
<tr>
<td>Individual Creativity (Z)</td>
<td></td>
<td></td>
<td>1.780</td>
</tr>
</tbody>
</table>

Source: SmartPLS 3.0 Processing Results (2021)

### Table 5. Value of R Square

<table>
<thead>
<tr>
<th>Variables</th>
<th>R Square</th>
<th>R Square Adjusted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innovative Behavior (Y)</td>
<td>0.608</td>
<td>0.605</td>
</tr>
<tr>
<td>Individual Creativity (Z)</td>
<td>0.438</td>
<td>0.436</td>
</tr>
</tbody>
</table>

Source: SmartPLS 3.0 Processing Results (2021)

### Table 6. Hypotheses Testing

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Relationship</th>
<th>Beta</th>
<th>SE</th>
<th>T Statistics</th>
<th>P-Values</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>Z -&gt; Y</td>
<td>0.482</td>
<td>0.071</td>
<td>6,813</td>
<td>0.000</td>
<td>Supported</td>
</tr>
<tr>
<td>H2</td>
<td>X -&gt; Y</td>
<td>0.371</td>
<td>0.061</td>
<td>6,068</td>
<td>0.000</td>
<td>Supported</td>
</tr>
<tr>
<td>H3</td>
<td>X -&gt; Z</td>
<td>0.662</td>
<td>0.038</td>
<td>17,642</td>
<td>0.000</td>
<td>Supported</td>
</tr>
<tr>
<td>H4</td>
<td>X -&gt; Z -&gt; Y</td>
<td>0.319</td>
<td>0.048</td>
<td>6,653</td>
<td>0.000</td>
<td>Supported</td>
</tr>
</tbody>
</table>

Source: SmartPLS 3.0 Processing Results (2021)

### C. Hypothesis Test

Hypothesis testing in PLS is also called the inner model test. This test includes a significance test for direct and indirect effects as well as measuring the magnitude of the influence of exogenous variables on endogenous variables. To determine the effect of psychological capital on the innovative behavior of individual female employees through individual creativity as a mediating variable, a direct and indirect effect test is needed. The effect test was carried out using the t-statistic test in the partial least squared (PLS) analysis model using the SmartPLS 3.0 software. With the bootstrapping technique, the R Square value and the significance test value were obtained as shown in Table 5 and Table 6.

Based on Table 5 above, the R Square value of individual creativity (Z) is 0.438, which means that the individual creativity variable (Z) can be explained by the psychological capital variable (X) of 43.8%, while the remaining 56.2% is explained by other variables not discussed. In this research, Meanwhile, the R Square value for innovative behavior (Y) is 0.608, which means that the variable innovative behavior (Y) can be explained by the variable psychological capital (X) and individual creativity (Z) of 68.8%, while the remaining 31.2% is explained by other variables which was not discussed in this study. Meanwhile, Table 6 shows the t-statistics and p-values which show the influence between the research variables that have been mentioned.

### D. Discussion

The results of data analysis show that: first, individual creativity has a positive and significant effect on innovative behavior. This is evidenced by the t-statistics value of 6.813 is greater than 1.96 and the p-value of
0.000 is smaller than 0.05. In conclusion, the hypothesis H1 is accepted. Second, psychological capital has a positive and significant effect on individual creativity. Evidenced by the t-statistics value of 6.068 is greater than 1.96 and the p-value of 0.000 is smaller than 0.05. In conclusion, the H2 hypothesis is accepted. Third, psychological capital has a positive and significant effect on innovative behavior. This is evidenced by the t-statistics value of 17.642 which is greater than 1.96 and the p-value of 0.000 is smaller than 0.05. In conclusion, hypothesis H3 is accepted. Fourth, psychological capital positive and significant effect on innovative behavior through individual creativity. This is evidenced by the t-statistics value of 6.653 which is greater than 1.96 and the p-value of 0.000 is smaller than 0.05. In conclusion, hypothesis H4 is accepted.

This study aims to improve understanding and application of the fundamentals of innovation in manufacturing organizations. Contributions can be summarized in three parts. First, in contrast to most previous studies on the level of organizational innovation, this study focuses on innovation from the perspective of individual employees, particularly female employees. Thus, the results of this study deepen and broaden the literature on understanding and innovative practices of female employees in the manufacturing industry. Because in fact, in many manufacturing industries, especially in the area of footwear and garment commodities, the majority of employees are female. Therefore, the creativity of these female employees is the main source of innovation for the company. Second, research previously limited to the manifestation of innovative behavior or research so-called innovative behavior of individuals. Although individual innovative behavior is an interesting aspect, this study extends previous research as it increases our knowledge of the factors that impact employees, namely the cognitive processes associated with individual innovative behavior. By incorporating the concept of individual creativity, this research offers insight into the relationship between the basic premise of individual creativity and individual innovative behavior.

In line with previous research, the innovative behavior of individuals in this study is defined as “the implementation of new and useful ideas in a job role.” (Battistelli et al., 2013). As mentioned above, the individual's innovative behavior includes various manifestations of “novel” behavior at work. In particular, “novelty” ranges from incremental (minor) innovation on the one hand, to radical innovation (major) on the other. Likewise, the aspect referred to as the “in” work role in the definition of an individual's innovative behavior covers the various “times and places” where “novelty” or innovation occurs. In particular, the term “in” job roles can include innovation by frontline employees (eg finding new ways to manage packaging production) as well as ‘in’ backstage work (eg new administrative routines or internal work processes). Thus, the definition of individual innovative behavior in this study touches on one of the earliest definitions of innovation. Schumpeter (2008), which describes innovation in a broad sense as the implementation of a combination of new services, workplace processes, products and markets. By incorporating psychological capital, this study also provides new insights into how personal factors, individually and collectively, can influence individual creativity and employees' innovative behavior.

IV. CONCLUSION

This study contributes to the understanding and practice of innovation in manufacturing industry organizations from the perspective of individual female employees. In particular, this study reveals a multifaceted association between psychological capital, individual creativity, and innovative behavior of female employees in the manufacturing industry in Tangerang. Tit has been proven that (i) variable individual creativity has a positive and significant effect on innovative behavior, (ii) psychological capital positive and significant effect on individual creativity, (iii) psychological capital positive and significant effect on innovative behavior, (iv) psychological capital positive and significant effect on innovative behavior through individual employee creativity in the manufacturing industry in Tangerang.

REFERENCES


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