

# Organizational Culture and Innovative Work Behavior in Manufacturing Company: The Role of Employee Engagement as a Mediator

Rianti Setyawasih<sup>1</sup>, Hamidah<sup>2</sup>, Agung Dharmawan Buchdadi<sup>3</sup>

<sup>1,2,3</sup>Universitas Negeri Jakarta, Indonesia.

Corresponding Author: Rianti Setyawasih

DOI: <https://doi.org/10.52403/ijrr.20220143>

## ABSTRACT

This study aims to examine and analyze the innovative work behavior shaped by organizational culture and employee engagement in Manufacturing Company on Indonesia. The study also aimed to examine the mediating effect of employee engagement. The research design uses primary data collected from 254 respondents who work in Manufacturing Company on Indonesia. The data were analyzed using a structural equation model using AMOS software. The results show that organizational culture and employee engagement have a direct positive effect on innovative work behavior and organizational culture has a direct positive effect on employee engagement. Furthermore, employee engagement partially mediates the relationship between organizational culture and innovative work behavior.

**Keywords:** Organizational Culture, Innovative Work Behavior, Employee Engagement

## INTRODUCTION

Companies that are able to maintain long-term survival generally place innovation as an input to organizational development engineering (Vernon, 1966; Wagner and Hollenbeck, 2010). Innovation is increasingly becoming an urgent need with the COVID-19 pandemic that companies must face along with the challenges of the business environment characterized by volatility, uncertainty, complexity, and ambiguity. Meanwhile, the

innovation capacity of companies in a country is one of the measures in determining the global competitiveness index. However, the innovation capacity of companies has not been studied comprehensively in Indonesia based on managerial functions, both research and development functions, production processes, finance, human resources, and marketing; as well as based on technological and organizational aspects. Meanwhile, based on the scientific perspective of human resource management, a number of researchers agree that innovative work behavior can represent the company's innovation capacity (Pandiangan et al., 2021).

Innovative work behavior in particular began to be identified since the 1980s, as was done by Kanter in 1988 (Kanter, 2009), West and Farr (1989), Scott and Bruce (1994), and Janssen (2000). Innovative work behavior is a series of voluntary actions armed with knowledge, based on a desire to go beyond routine and the intention to provide useful outcomes in the form of ideas, new procedures, new work methods, new processes, and/or new products. In relation to the stages of the innovation process, observations regarding innovative work behavior emerged in 1988 based on Kanter's research which stated that Innovative Work Behavior is the behavior of knowledge workers who are bound at each stage of the innovation process, which

includes (a)generating ideas; (b)mobilize efforts to realize ideas; (c)realization of ideas into a model, a product or a plan; (d)adoption of ideas, through the commercialization of ideas (Shih and Susanto, 2011).

Spiegelaere et al. (2016) further emphasizes the application of innovative work behavior in groups or organizations as follows: Innovative work behavior is the behavior of all employees that is directed to produce, introduce and or apply new ideas, processes, products or procedures that are relevant to be adopted and provide benefits in a role, group or organization. Innovative work behavior refers to the behavior of all employees related to identifying problems and opportunities, finding innovative solutions, suggesting innovations to colleagues and supervisors, and most importantly contributing to implementing innovation in the workplace.

Li et al. (2017) view that innovative behavior is carried out for the success of an organization, as stated that innovative work behavior is a term that refers to a complex series of actions aimed at generating, promoting, and realizing new ideas in an organization, this kind of behavior has been proven to be a major factor that contribute to organizational success.

Li and Zheng (2014) state that an action taken in response to changing customer demands is the key word in the formulation of innovative behavior, namely that innovative behavior is an action in generating, promoting and applying innovative thoughts in an organization that is beneficial to individual performance. and organization, which enables employees to use innovative, fast and accurate ways of thinking in responding to changing customer demands.

Innovative work behavior is shown by paying attention to actions that are more than routines that are important in dynamic business life, namely as employee behavior that aims to realize the initiation of ideas, processes, products, or procedures related to their work (Pandiangan et al., 2018).

Innovative work behavior also refers to doing tasks that are more than just routines. Routine work sometimes cannot respond to new situations quickly so that new methods developed, introduced and applied are very important in dynamic business life (Eskiler et al., 2016).

The results of previous studies have revealed several important variables that determine innovative work behavior as carried out by Jankelova et al. (2021), Khan et al. (2020), Lukoto and Chan (2017), Faraz et al. (2017), Eskiler et al. (2016), Stoffers et al. (2015), Hartmann (2006), Li et al. (2017) reveal the relationship between organizational culture. Meanwhile, the effect of employee engagement on innovative work behavior has been carried out by Karkoulian et al. (2020), Spiegelaere et al. (2012, 2015), Rattigorn (2020), and Kwon and Kim (2019). An investigation of the relationship between organizational culture and employee engagement has been carried out by Reis et al. (2016); Bedarkar and Pandita (2014), Sarangi and Srivastava (2012); and Smith and Markwick (2009). It is proven that the role of employee engagement as a variable that partially mediates between organizational culture and innovative work behavior has been carried out by Hosseini and Shirazi (2021), Nadeem et al. (2018), Park (2014), Lin and Li (2017).

Interestingly, we observe that the literature related to innovative work behavior in manufacturing companies is still limited, especially those relating to the relationship between organizational culture, employee engagement, and innovative work behavior (Pandiangan, 2015). Given the importance of innovation produced by employees who use their knowledge assets at work, it is important to study research that reveals innovative work behavior among employees in manufacturing companies.

This research has three main objectives which in the future will contribute to the literature on human resource management and organizational

behavior in the context of organizational development. First, this study analyzes the influence of organizational culture and employee engagement which are thought to be the main factors that determine the realization of innovative work behavior among employees. Second, analyze the relationship between organizational culture in shaping employee engagement. Finally, the analysis is expanded by looking at the role of employee engagement in strengthening the relationship between organizational culture and innovative work behavior. We believe that the innovative work behavior shown by employees based on the provision of knowledge, employee approval, and then they consciously realize it in practice, will be strong in employees who are engaged with their work and organization.

The flow of this paper is as follows, the first part reveals a literature review related to organizational culture, employee engagement, and innovative work behavior as the basis for formulating hypotheses. The methodology section describes in detail how this research was organized. Furthermore, in the research results section, the findings, discussions, and implications both theoretically and practically are described. Finally, the paper closes with limitations and suggestions for further research and conclusions.

## **LITERATURE REVIEW**

### **Organizational Culture and Innovative Work Behavior**

Innovative work behavior needs to be based on values, assumptions, and beliefs shared by members of the organization (Pandiangan, 2018). Values, assumptions, and beliefs that apply to an organization will form the same perception of what each individual should be able to do for the survival of his organization. According to Robbins and Judge (2013), one of the characteristics that make up the essence of organizational culture, namely innovation and risk taking, in this case the extent to which an organizational culture can direct

behavior to innovate and dare to take risks. Hartnell et al. (2011) stated that one type of culture that encourages innovative behavior is the Adhocracy culture type that prioritizes the assumption of change, with risk-taking artifacts, creativity, and adaptability, with organizational effectiveness criteria in the form of innovation. Meanwhile Khan et al. (2020) explains how organizational culture can shape innovative behavior through the creation of a creative, adaptive, and innovative work atmosphere.

According to Auernhammer and Hall (2013) the important thing in organizational culture that can shape innovative work behavior is that the organization is open to change, encourages open communication to new ideas or ideas that are not usually done, the organization tolerates mistakes on trials, and instilling intrinsic motivation in its employees. Meanwhile, according to Azeem et al. (2021) the important thing about organizational culture that can shape innovative behavior is that the organization is open to change, encourages open communication to new ideas or ideas that are not usually done, the organization tolerates mistakes for testing, and instills intrinsic motivation. to his employees. More emphatically, Eskiler et al. (2016) stated that organizational culture is the main determinant and is clearly proven in shaping innovative work behavior. Hafit et al. (2015) stated that one of the important areas that organizations need to pay attention to is organizational culture, which can create a supportive environment in which innovation can thrive and be competitive. According to Faraz et al. (2017) this organizational culture is critical because it mediates the relationship between transformational leadership and innovative work behavior. Empirically research by Jankelova et al. (2021) illustrates that organizational culture has a direct positive effect on innovative work behavior. Likewise research conducted by Azeem et al. (2021) concluded that organizational culture has a direct positive effect on innovation,

organizational culture is indispensable for the success of business operations because it can encourage knowledge sharing and innovation activities among the workforce and link them with high-level business processes that can be conducive to obtaining advanced manufacturing capabilities. The research results of Khan et al. also supports that organizational culture has a direct positive effect on innovative work behavior and even organizational culture mediates the relationship between leadership and innovative work behavior (Khan et al., 2020); Lukoto and Chan concluded that when employees perceive a positive innovative culture, they tend to exhibit innovative behavior in certain stages of innovative work behavior (Lukoto and Chan, 2017); Stoffers et al. (2015) concluded that organizational culture (market culture) is positively related to innovative work behavior, namely at the stage of idea generation, idea promotion and idea realization. Therefore:

**H<sub>1</sub>:** Organizational culture has a positive effect on innovative work behavior.

### **Employee Engagement and Innovative Work Behavior**

An employee who has proactive characteristics, is able to make adjustments and role expansions to job needs, is active in expanding skills, is persistent against obstacles faced and is able to adapt to change, will have a desire to work better than just routine and have a desire to provide better work results. beneficial for himself, the work team, and the organization. In this case, an employee who is focused and diligent in thinking, feeling, and acting, by presenting his identity (affective, cognitive, and psychomotor) will be willing to use his energy and time to get ideas or better ways of working to develop work processes performed or the products it produces.

Albrecht et al. (2015) states that employee engagement forms individual outcomes, in the form of attitudes, job satisfaction, commitment, and retention

(reducing employee intentions to leave the job/organization) and other results, resulting in employee performance/behavior, in the form of in-role behavior (behavior according to its role), extra-role behavior (behavior that exceeds its role), and other positive behaviors; form results in teams, work units, and organizations (team, unit, and organizational outcomes), in the form of team performance, team innovation, organizational performance, financial returns, and others. In the end, all of that forms a competitive advantage (competitiveness of the organization).

Nadeem et al. (2018) explains how the effect of employee engagement on the formation of employee innovative behavior, namely a situation where the organization can create a conducive atmosphere, so that people feel happy to work wholeheartedly in their workplace, so that they are fully involved in the innovation process, by utilizing every potential resources that exist in themselves and those of the organization.

According to Spiegelaere et al. (2015) there is an interesting relationship between job design (autonomy and time pressure) on employee engagement and innovative behavior. Job design directs the occurrence of innovative behavior, however engagement plays an important role in offering (acting as a buffer or antidote or buffer) from the pressure experienced by employees in shaping innovative behavior. It is also stated that engagement is an outcome at the individual employee level, which is also thought to act as an antecedent that gives rise to innovative behavior. However, excessively high time pressure that occurs in shaping innovative behavior tends to weaken the engagement itself.

Empirically research conducted by Hosseini and Shirazi (2021) and Park et al. (2014) showed that work engagement has a direct positive effect on innovative work behavior, work engagement is proven to play a role in mediating the relationship between learning organizations and innovative work behavior, while Contreras et al. (2020) found the role of employee

work engagement as a mediating variable between leadership and innovative work behavior.

Lin and Lee's research results; Spiegelaere et al. (2012); Spiegelaere et al. (2015); Contreras et al. (2020); Nadeem et al. (2018) shows that employee engagement has a direct positive effect on innovative work behavior. Research Nadeem et al. (2018) shows that employee engagement is directly related to innovative work behavior. Meanwhile, Karkoulian et al. (2020) in detail proves that employee engagement is directly related to innovative work behavior, namely at the idea generation stage; idea implementation; and innovative use of company assets. Therefore:

**H<sub>2</sub>:** Employee engagement has a positive effect on innovative work behavior.

### **Organizational Culture and Employee Engagement**

A well-internalized organizational culture in an organization will shape employee respect for the organization, leadership, team membership, work, and self-identity, so that it will direct an engaged situation in the form of a conducive situation for each individual to work focused and diligently in thinking, feel, and act, by presenting their identity (affective, cognitive, and psychomotor) during work to be able to perform well. Leaders who are successful in forming engaged employees are those who have succeeded in building a culture of respect in their organizational environment.

The relationship between organizational culture and employee engagement as explained by Smith and Markwick (2009) is that an employee will engage in his organization, if he himself understands the values and goals of his organization, and understands how their role is to contribute to the achievement of organizational goals. Bedarkar and Pandita (2014) also explain the relationship between employee engagement and corporate culture, namely that the formation of employee engagement is not a situation or

event that can immediately occur, because the situation can only be created because there are values, attitudes, and behaviors that have been integrated with the company culture.

Research by Reis, Trulen, and Story concludes that there is a positive relationship between adhocracy organizational culture and work engagement and there is a positive relationship between clan organizational culture and engagement (Reis et al., 2016).

Sarangi and Srivastava's research illustrates that 40% of employee engagement variations are caused by organizational culture. The influence of organizational culture on employee engagement is positive and significant (Sarangi and Srivastava, 2012). So that:

**H<sub>3</sub>:** Organizational culture has a positive effect on employee engagement.

### **Employee Engagement as Mediator between Organizational Culture and Innovative Work Behavior**

The influence of organizational culture on innovative work behavior has been empirically proven by Jankelova et al. (2021); Azeem et al. (2021); Eskiler et al. (2016); Lukoto and Chan (2017); and Stoffers et al. (2015). Meanwhile, research by Albrecht et al. (2015); Nadeem et al. (2018); Spiegelaere et al. (2012); Spiegelaere et al. (2015); Hosseini and Shirazi (2021); Park et al. (2014); Lin and Lee (2017); and Contreras et al. (2020) has proven that there is an effect of employee engagement on innovative work behavior. The influence of organizational culture on employee engagement has been described by Smith and Markwick (2009); Bedarkar and Pandita (2014); Reis et al. (2016); Sarangi and Srivastava (2012).

By listening to the three patterns of relationship, it can be assumed that the influence of organizational culture on innovative work behavior can be through the formation of employee engagement. In this case, it can be explained that a well-internalized organizational culture in an

organization will shape employee respect for the organization and employees will feel that their identity is an important part of the organization, and strive to make themselves able to contribute to the organization, so that it will lead to an engaging situation for the organization. every individual towards the organization to work as well as possible, by presenting his identity during work to be able to perform well. Meanwhile, employee engagement will lead to special work behavior, trying to meet or exceed certain performance standards, seeking the best work results through him, to produce something new for the organization, both in the form of processes and products. Therefore:

**H4:** Positive relationship between organizational culture and innovative work behavior will be mediated by employee engagement.

## METHODOLOGY

### Sample and Data Collection

To realize the research objectives, samples and data were collected from respondents who work in manufacturing companies. The sample is part or as a representative of the population that will be studied (Octiva et al., 2018). The sample

taken in this study is a number of employees who utilize their knowledge assets at work. They were selected by meeting the following criteria: (1) status as permanent employees; (2) occupying positions at the senior level, middle level, and junior level; (3) a minimum working period of 1 (one) year; (4) has been involved in a working group. Through the data screening process, 254 eligible samples were obtained as presented in Table 1.

**Table 1: Profile of Respondents**

		Frequency (%)
Age	< 30	7.48
	30 – 50	84.25
	> 50	8.27
Position	Senior Level	11.03
	Middle Level	57.87
	Junior Level	31.10
Work Experience (Years)	< 5	3.54
	5 – 10	72.5
	10 – 15	7.09
	> 20	17.32

Source: Primary Data, n=254

The data were analyzed using a structural equation modeling (SEM) as presented in Figure 1. SEM is a label for a diverse set of methods used by scientists in experimental and observational research across science, business, and other fields (Tobing et al., 2018). It is most widely used in the social and behavioral sciences.

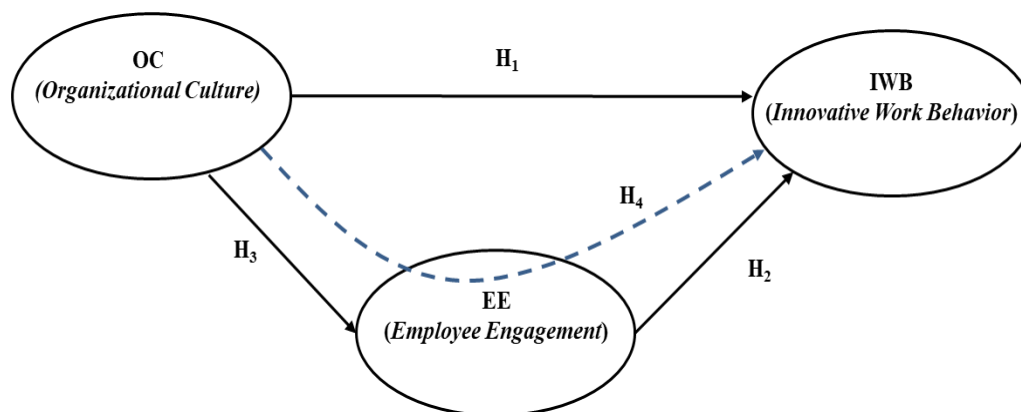


Figure 1: Proposed Research Model

### Measurement

Innovative work behavior is measured through four dimensions/indicators such as: “generating new ideas” which is formed based on Scott and Bruce (1994), Janssen (2000), Spiegelare et al. (2012), Prieto and Santana (2014), and Li et

al. (2017). Each response was recorded using a five-point Likert scale with a range of 1=never to 5=always.

To measure Organizational culture, we use six dimensions/indicators based on Luthans and Doh (2012) such as “transmitted between generations” and

“patterned on behavior”; for the dimension/indicator “benefits the organization” based on Hartnell et al. (2011) and Robbins and Judge (2013). A five-point likert scale with a range of strongly disagree (1) to strongly agree (5) was used to record respondents' answers.

Employee engagement (employee engagement) Responses to employee engagement were recorded using a five-point Likert scale (1= never to 5=always). Measurements through three dimensions/ indicators, such as “Putting full thought on work and organization” compiled by Shuck et al. (2014, 2017) and Macey et al. (2009).

Validity and reliability to ensure validity, we calculate the loading factor using confirmatory factor analysis (CFA), all indicators show valid, for example: loading factor “generating new ideas” (0.832); loading factor "patterned on behavior and work" (0.743); loading factor “physical attachment” (0.970). We calculated reliability using composite reliability (CR) where all variables were reliable, namely for innovative work behavior (CR = 0.958); organizational

culture (CR= 0.877); and employee engagement (CR= 0.976).

Fit models to determine the validity of the proposed model, we calculated the statistical model fit using a confirmatory factor analysis model based on structural equation modeling. For the fit model, the full model measurement results were obtained (CMIN/df=1.197; root mean square error of approximation (RMSEA) 0.028; goodness of fit index (GFI) 0.934; adjusted goodness of fit index (AGFI) 0.914; and tucker lewis index (TLI) 0.992; based on the criteria, the model shows a good fit (Hair et al., 2019).

## RESULT AND DISCUSSION

### RESULT

#### Descriptive Statistics

The mean, standard deviation, and correlation coefficients have been calculated for the variables in this study and are presented in Table 2. The correlation coefficient shows that there is a positive and significant relationship between organizational culture, employee engagement, and innovative work behavior variables.

Table 2: Descriptive Statistics

Variables	Mean	Standard Deviation	Correlation		Composite Reliability
			IWB	OC	
Innovative Work Behavior (IWB)	3.663	0.699			0.958
Organizational Culture (OC)	3.575	0.754	0.518*		0.877
Employee Engagement (EE)	3.640	0.679	0.765*	0.551*	0.976

Source: Primary Data and Author's Calculation; \*significance level < 0.05

#### Hypothesis Test

The results of hypothesis testing (Table3) show that organizational culture in manufacturing companies has a significant positive direct relationship (pIWB, OC=0.137; c.r.=2.443; p-value<0.05) with innovative work behavior (H<sub>1</sub>); similarly, employee engagement (pIWB, EE=0.635; c.r.=9.967; p-value < 0.000) was also found to be positively and significantly associated with innovative work behavior (H<sub>2</sub>); There was a direct positive and significant relationship between organizational culture (pEE, OC=0.453; c.r.=7.480; p-value < 0.000) and employee engagement (H<sub>3</sub>).

Next, we examine the mediation of employee engagement on the relationship between organizational culture and innovative work behavior by first ensuring that the requirements as recommended by Hair et al. (2019), firstly, the individual relationship is statistically significant, namely (a) between exogenous and endogenous variables is significant; (b) the relationship between exogenous variables and mediators is significant; (c) the relationship between mediators and endogenous variables is significant; and second, (a) estimate the initial model which is only a direct relationship between exogenous and endogenous variables and

(b)estimate the second model that includes mediating variables; then assessed the presence of a mediating variable whether it partially, fully, or not mediates the relationship between exogenous and endogenous variables. Through bootstrapping method using AMOS, the coefficient of indirect relationship between organizational culture and innovative work behavior through employee engagement is 0.288\*\* (H<sub>4</sub>).

Overall, the results of the study found a significant positive direct relationship between organizational culture and employee engagement with innovative work behavior; there is a direct positive relationship between organizational culture and employee engagement; and employee engagement partially mediates the relationship between organizational culture and innovative work behavior.

**Table 3: Hypothesis Test**

Variables	Hypotheses	Direct Effect	S.E.	C.R.
<b>Endogen Variable IWB</b>				
Organizational Culture (OC) (OC→IWB)	H <sub>1</sub>	0.137*	0.055	2.443
Employee Engagement (EE) (EE→IWB)	H <sub>2</sub>	0.635***	0.053	9.967
<b>Endogen Variable EE</b>				
Organizational Culture (OC) (OC→EE)	H <sub>3</sub>	0.453***	0.071	7.480
<b>Indirect Effect</b>				
EE as a Mediator (OC→EE→IWB)	H <sub>4</sub>	0.288**		

Source: Primary Data and Author's Calculation;

\*significance level p < 0.05; \*\*significance level p < 0.01; \*\*\*significance level p < 0.000

## DISCUSSION

It is understood and accepted that innovation is the most important factor for an organization to maintain its sustainability (Vernon, 1966; Wagner and Hollenbeck, 2010). To confirm this research, the effect of organizational culture and employee engagement on innovative work behavior needs to be explored and discussed. Likewise, the mediating effect of employee engagement on innovative work behavior needs to be investigated. To achieve the research objectives, data were collected from a number of respondents who work in manufacturing companies in Indonesia. Armed with the literature review, four hypotheses were conceptualized where the first three hypotheses were aimed at testing the direct positive effect of organizational culture and employee engagement on innovative work behavior and organizational culture on employee engagement; while the fourth hypothesis examines a positive indirect relationship between organizational culture and innovative work behavior with a mediator of employee engagement. The study found that

the four hypotheses were proven and accepted.

The findings obtained in this study are in line with those previously carried out by Jankelova et al. (2021), Khan et al. (2020), Lukoto and Chan (2017), Faraz et al. (2017), Eskiler et al. (2016), Stoffers et al. (2015), Hartmann (2006), and descriptive explanations made by Robbins and Judge (2013), Hartnell et al. (2011), Auernhammer and Hall (2013). The interesting thing is that the results of this study contradict the results of research conducted by Li et al. (2017) which states that organizational culture does not directly affect innovation but the role of leadership that makes organizational culture able to shape organizational innovation in companies.

We found that employee engagement has a direct positive effect on innovative work behavior which strengthens the results of previous research by Karkoulian et al. (2020), Spiegelaere et al. (2012, 2015), Rattigorn (2020) which states that work engagement is positively correlated with innovative work behavior and Kwon and Kim (2019) which states that



engaged employees are more likely to behave innovatively.

A direct positive relationship between organizational culture and employee engagement is proven and is in line with Reis et al. (2016); Bedarkar and Pandita (2014) namely that the formation of employee engagement is not a situation or event that can immediately occur, because the situation can only be created because there are values, attitudes, and behaviors that have been integrated with the company culture; Sarangi and Srivastava (2012); and Smith and Markwick (2009) that an employee will be engaged in his organization, if he himself understands the values and goals of his organization, and understands how their role is to contribute to the achievement of organizational goals.

The proven role of employee engagement as a variable that partially mediates between organizational culture and innovative work behavior is in line with Hosseini and Shirazi (2021), Nadeem et al. (2018), Park (2014), Lin and Li (2017). By paying attention to the three patterns of relationship between organizational culture and innovative work behavior, the relationship between organizational culture and employee engagement, and the relationship between employee engagement and innovative work behavior, it can be understood that the influence of organizational culture on innovative work behavior can be through the formation of employee engagement. In this case it can be explained that a well-internalized organizational culture in an organization will shape employee respect for the organization and employees will feel that their identity is an important part of the organization, and strive to make themselves able to contribute to the organization, so that it will direct an engaging situation for the organization each individual to the organization to work as well as possible. Employee engagement will bring out special work behavior, strive to meet or exceed certain performance standards, strive for the best work results through him, to produce

something new for the organization, both in the form of processes and products.

## CONCLUSION

Innovation is an important factor for the company because it is the source of the company's ability to grow, be competitive, and sustainable. This study confirms that organizational culture and employee engagement have a direct positive effect on the innovative work behavior of employees in manufacturing companies in Indonesia. Likewise, organizational culture has a direct positive effect on employee engagement. Interestingly, it was found that organizational culture has a positive indirect effect on innovative work behavior through employee engagement; in this case, employee engagement partially mediates the relationship. From the results of this study, it is important for a Human Resources Manager to pay attention to that as an individual factor, employee engagement needs to be treated as well as possible in building innovative work behavior in the workplace.

**Acknowledgement:** None

**Conflict of Interest:** None

**Source of Funding:** None

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How to cite this article: Setyawasih R, Hamidah, Buchdadi AD. Organizational culture and innovative work behavior in manufacturing company: the role of employee engagement as a mediator. *International Journal of Research and Review*. 2022; 9(1): 360-371. DOI: <https://doi.org/10.52403/ijrr.20220143>

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