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THE ROLE OF E-TRAINING, CAREER DEVELOPMENT, AND EMPLOYEE RESILIENCE IN INCREASING EMPLOYEE PRODUCTIVITY IN INDONESIAN STATE-OWNED ENTERPRISES

THE ROLE OF E-TRAINING, CAREER DEVELOPMENT, AND EMPLOYEE RESILIENCE IN INCREASING EMPLOYEE PRODUCTIVITY IN INDONESIAN STATE-OWNED ENTERPRISES

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Abstract.

This study analyzes the effect of e-training, career development, and employee resilience on employee productivity of State-Owned Enterprises for Survey Services in Indonesia. The sample in this study were employees of one of the State-Owned Enterprises for Survey Services. The sampling technique used is purposive sampling with a valid response of 270 respondents. The research method used is quantitative. Data was collected by distributing questionnaires using a five-point Likert scale. Data were analyzed using exploratory factor analysis and Structural Equation Modeling (SEM) using Amos 24. The results showed that e-training and career development had a significant positive effect on employee resilience. Career development and employee resilience had a significant positive effect on employee productivity. In contrast, e-training does not affect employee productivity. The results of this study provide useful implications for policymakers to determine company strategies related to e-training, career development, and employee resilience to increase employee productivity.

Keywords: e-training, career development, employee resilience, employee productivity.

1. INTRODUCTION

Indonesia is facing the industrial revolution 4.0 with technology that is developing very quickly in digitalization technology, robotization, intelligent automation, internet of things (IoT), artificial intelligence, big data,

machine learning, and so on that can have an impact in various sectors of life such as the economy, national and global business, society and individuals (Heri, 2019).

The human resources needed are those who can understand technology quickly, are adaptive and responsive to technological changes, and have a service attitude and high integrity (Sihite, 2018). It is necessary to reform human resources investment that involves training and human resource development to increase productivity, improve performance and develop employee competencies to be adaptable. (Yunita, 2018).

Career development and training can improve employee performance to increase productivity in the company (Massie et al., 2015). Career development will benefits companies and individuals because it can improve employee performance and productivity, reduce labor turnover, facilitate the fulfilment of the company's internal HR staffing needs, and increase promotions for employees (Permatasari, 2006). At this time, e-training has developed, namely types of electronic training such as video conferencing and web-based training (Ramayah et al., 2012).

To increase productivity, employees are needed who have high flexibility, are dynamic, and have resilience in dealing with problems and crises that occur in the company (Zehir & Narcikara, 2016). The level of resilience possessed by an employee will impact his performance in doing a job. Resilience is often considered a common thing formed by social background, family, and career experience. However, being a resilient employee is a skill that can be learned, trained, and formed (Emmanuella, 2020).

Research on 645 employees working in the private sector found that employee resilience positively affects employee productivity. When employees have a high level of resilience, it will increase employee productivity (Zehir & Narcikara, 2016). Luthans et al. (2006) stated that employee resilience could be improved through training because individual resilience increases significantly after the training program. This does not happen in other groups who do not receive the training program. Except training provided by the company, career opportunities can help employees deal with the stress. In other words, career development can increase employee resilience (Khan et al., 2019).

This study examines the direct effect of e-training, career development, and resilience on employee productivity. This study attempts to answer the following research questions: (1) does e-training affect employee productivity and employee resilience? (2) does career development affect employee resilience and employee productivity? (3) does employee resilience affect employee productivity?

2. LITERATURE REVIEW AND HYPOTHESES

2.1. E-training and Employee Productivity

E-learning is learning whose implementation using the help of electronic devices, such as computers, smartphones, audio, videotape, or networks (Batubara et al., 2018). E-learning-based training is training that uses information technology as the delivery method regarding the time frame, much shorter lessons are usually specially designed to achieve specific learning goals or skills. Type standard electronic training is video conferencing and training Web-based. This technology is intended to enable the delivery of new, better, cheaper, and more learning faster than traditional classroom methods (Ramayah et al., 2012).

Training can increase not only employee productivity but also organizational productivity (Nda & Fard, 2013). Many studies have proven that training is a fundamental and practical instrument in producing high productivity (Malaolu & Ogbuabor, 2013). As research by Nda and Fard (2013), Ilyas et al. (2017), Nurshabrina and Andrianti (2020), Sabir et al. (2014), e-training can increase employee focus and make it easier for employees to understand their respective job desc because the material provided in the online training is based on theoretical and practical realities that have been adapted to the job desc, this has been proven in his research that e-training has a significant positive relationship on employee productivity. Thus, H1 is e-training a significant positive effect on employee productivity.

2.2. E-training and Employee Resilience

Employee resilience describes the extent to which employees succeed cope with change and setbacks in the workplace and where they are adapted to thrive in a new environment (Nguyen et al., 2016). Resilience plays an important role in managing positive stress. That resilience may be characterized as a coping response to adverse events and positive outcomes, such as promotions or new job responsibilities (Luthans et al., 2008).

Training provided to employees is one of the important things for companies to improve employee resilience and welfare (Hodliffe, 2014). Smith et al. (2018), in their study of 600 respondents sponsored by meQuilibrium, showed that online training programs have a positive effect on resilience, stress, and symptoms in proportion to the time of use. Vanhove et al. (2016) conducted a meta-analysis by evaluating 37 studies that considered training to increase resilience. Employee training and development can improve adaptive skills and problem-solving to cope with stress to increase employee resilience through a sense of belonging and support (Khan et al., 2019). Thus, H2 is e-training has a significant positive effect on employee resilience.

2.3. Career Development and Employee Resilience

Careers are separate but related sets of work, providing continuity, serenity and meaning in one's life, and a series of role experiences ordered by place increased responsibility, status, power, rewards, and career, as well as all the work done during the current working period (Arifin, 2013). Career development is a continuous process of an individual through a formally designed series of levels by the organization

or company through a focus on developing human resources to meet the organization's needs (Dayona & Rinawati, 2016).

A study conducted by Kuntz et al. (2017), 162 white-collar employees of the four organizations, showed that the sale positively influences employee resilience. Research by Lyons et al. (2015) entitled Resilience in the Modern Career that people who have their own career development goals are more resilient, which means that career development has a positive relationship with resilience. Srivastava dan Madan (2020) conducted a study on 272 middle-level managers in New Delhi, describing that resilience has a positive and significant relationship with their career satisfaction. They have better control over their work even in difficult times. Thus, H3 is a career development significant positive effect on employee resilience.

2.4. Career Development and Employee Productivity

Career development is a way for organizations to support or increase employee productivity while preparing them to face a changing world (Permatasari, 2006). Career development is increasing the workability individuals achieve to achieve the desired career (Ilah et al., 2020). Career development is a process of changing a situation or particular conditions in a positive direction through a series of positions, job or job titles, including the formal activation structure, offered company to employees to improve awareness, knowledge, and ability to work effectively and support employee career advancement (Ginting, 2003).

Career development is a joint activity between individual employees and the organization. Both parties must do what is required to ensure a thriving work climate that will result in maximum productivity (Gyansah & Guantai, 2018). Research by Chen et al. (2004) about career development and employee productivity in Thailand shows a positive and significant relationship between career development and employee productivity. Kelana et al. (2016) mention that career development is a systematic career management and can produce productive skills needed in the future. From research conducted, career development is one of the factors that can increase employee productivity. Thus, H4 is the existence of a positive and significant influence between career development and employee productivity.

2.5. Employee Resilience and Employee Productivity

Productivity is the ability of an employee to perform certain tasks according to standards of accuracy, completeness, cost, and predetermined speed (Sultana et al., 2012). According to Hanaysha (2016), employee productivity can be assessed regarding a person's effectiveness in performing their duties. It can be evaluated about the output it produces over a certain period.

Stress felt by employees can reduce employee performance, productivity, morale, and strain relationships at work (White, 2011) because employees who experience excessive stress have difficulty managing emotions, paying attention, making decisions, and thinking clearly. Research conducted in Turkey

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revealed that employee resilience has a positive and significant influence on employee productivity. This research is also supported by other research conducted on telecommunications companies in Indonesia which states that employee resilience affects employee productivity (Saifudin, 2018). Thus, H5 is the existence of a positive and significant effect between employee resilience and productivity of employees. Based on the literature discussion above, the research model is shown in Figure 1. The variables in this study were two exogenous constructs and two endogenous constructs. Career development and training based on e-learning are exogenous constructs. Employee resilience and employee productivity are endogenous constructs.

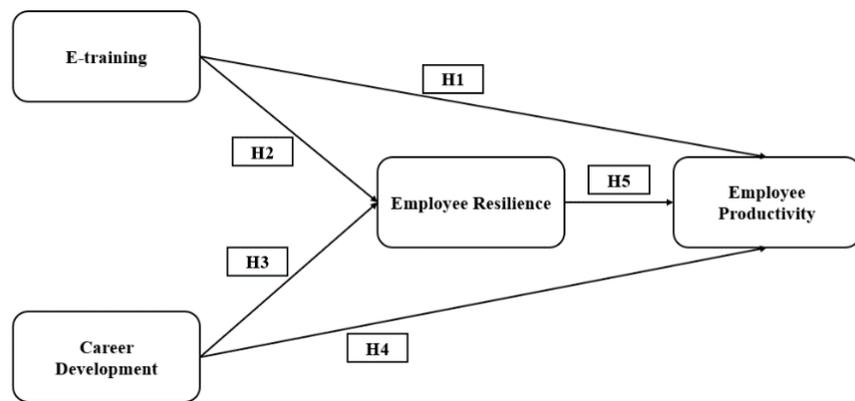


FIGURE 1. RESEARCH MODEL

Source: Author's Research Model

3. METHODS

3.1. Participants

Respondents in this study were employees of one of the State-Owned Enterprises (SOE) for Survey Services. The sampling method in this study uses a purposive sampling technique to determine specific criteria that are following the research objectives. The reason underlying the determination of the sample using specific considerations is that the data obtained later can be more representative (Cooper & Emory, 1996). The criteria taken are employees who have participated in the e-training program during the pandemic. Data was collected by distributing questionnaires using Google Form media. The research sample taken is 270 respondents. The sample size has met the minimum sample criteria in data processing using SEM.

3.2. Measurement

This research was conducted in Indonesia. Therefore the statement from the questionnaire was adapted into Indonesian. Five item statements from Hanaysha (2016) were adapted to measure employee productivity. Nine statement items from Hodliffe (2014) were adapted to measure employee resilience variables. Seven statement items from Din (2010) were adapted to measure the e-training variable. Seven statement items from Neureiter and Traut-Mattausch (2016) were adapted to measure career development variables. The questionnaire uses a five-point Likert scale. The operational definition of the variable is presented in Table 1.

TABLE 1. OPERATIONAL DEFINITIONS

Variable	Operational definition
Employee Productivity	Employee productivity is assessed based on several aspects such as the level of effectiveness, efficiency, quality, and quantity of employees to do the job.
Employee Resilience	The ability of employees to develop positively, cope with, and adapt to changes in the work environment is facilitated by organizational initiatives to utilize resources.
E-training	Training that uses information technology as a method of delivery regarding much longer learning time frame that is usually designed specifically to achieve certain learning goals or skills.
Career development	A series of levels designed by the company to prepare competent employees later to meet the company's needs.

Source: Author

3.3. Data Analysis Technique

The data analysis technique used was exploratory factor analysis to test the validity of the research instrument, Cronbach's alpha for reliability testing, and descriptive statistical analysis to analyze the characteristics of respondents using SPSS 25 software. Furthermore, to measure the research model and test hypotheses, confirmatory factor analysis and Structural Equations Model (SEM) using the goodness of fit (GOF) on the AMOS 24.

4. RESULTS

4.1. Participant Characteristics

Respondents in this study were permanent employees and contract employees at the State-Owned Enterprises for Survey Services, with a total of 270 respondents. Male respondents were 66.3%, and female respondents were 33.7%. In the age range, as many as 21.5% in the age range of 18-25 years, 54.8% of respondents aged 26-35 years, 10.4% aged 36-40 years, and 13.3% of respondents over 45 years. 47.8% of respondents are married, 41.1% are single, 0.4% are divorced, and 0.7% of couples die.

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In terms of education, most respondents are undergraduates with 74.1%, followed by a Diploma at 18.5%, then high school at 5.2%, and a master at 2.2%. The respondents' employment status was 51.1% permanent employees and 48.9% were contract employees with 93.3% staff positions and 6.7% manager positions. Respondents worked in several divisions, namely AKL (21.9%), AKU (10.7%), MGK (14.8%), TEK (13.3%), KAL (9.6%), PPP (12.6%), DUKBIS (13.0%), and JMMRR (4.1%). The working period of respondents with a range of 0 – 5 years (48.5%), 6 – 10 years (22.6%), 11 – 15 years (13.0%), 16 – 20 years (2.6%), and over 20 years (13.3%).

TABLE 2. PARTICIPANT CHARACTERISTICS

	n	%
Gender		
Female	91	33.7
Male	179	66.3
Age		
18 - 25	58	21.5
26 - 35	148	54.8
36 - 45	28	10.4
> 45	36	13.3
Marital Status		
Divorce	1	0.4
Married	156	57.8
Single	111	41.1
Others	2	0.7
Education		
High school/secondary education	14	5.2
Diploma	50	18.5
Bachelor's degree	200	74.1
Postgraduate degree	6	2.2
Employment Status		
Contract Employee	138	51.1
Permanent Employee	132	48.9
Position		
Staff	252	93.3
Structural	18	6.7
Division		
AKL	59	21.9
AKU	29	10.7
DUKBIS	35	13.0

JMMRR	11	4.1
KAL	26	9.6
MGK	40	14.8
PPP	34	12.6
TEK	36	13.3
Working Period (years)		
0 - 5	131	48.5
6 - 10	61	22.6
11 - 15	35	13.0
16 - 20	7	2.6
> 20	36	13.3

Source: Author

4.2. Validity and Reliability Test

The technique used to estimate reliability in this study uses Cronbach's alpha with a value of $\alpha > 0,60$ (Ghazali, 2017). While the guideline for the factor loading value on the EFA used is 0.35 because it is based on the number of samples, which is 270 (Hair et al., 2014). The results of the calculation of factor loading and Cronbach's alpha can be seen in Table 3.

TABLE 3. EXPLORATORY FACTOR ANALYSIS

Code	Variables and Indicators	Factor Loadings	Cronbach's Alpha
	Employee Productivity		$\alpha = 0.910$
PP3	I have a high standard of job achievement	0.921	
PP1	I do a lot of work every day	0.913	
PP4	My work is of high quality	0.865	
PP5	I always beat our team's target	0.853	
PP2	I get work done quickly and efficiently	0.844	
	Employee Resilience		$\alpha = 0.953$
RP3	I can handle high workloads for long periods	0.899	
RP1	I effectively adapt to changes at work	0.888	
RP5	I am constantly re-evaluating my performance and working to improve the way I do my job	0.887	
RP7	I know whom to contact at work when I need special skills or support	0.868	
RP4	I try hard to solve problems at work	0.857	

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RP2	I collaborate effectively with others to handle unexpected challenges	0.853	
RP8	I usually see change as an opportunity to grow	0.844	
RP6	I effectively respond to feedback, even criticism	0.829	
RP9	I tend to find the positives in the most challenging situations at work	0.816	
	E-training		$\alpha = 0.903$
PE4	The existing facilities and infrastructure in E-training of PT. SCI is very useful	0.855	
PE6	E-training builds my confidence to solve problems on the job	0.855	
PE5	I will be able to use the new skills gained from the E-training of PT. SCI for my professional career	0.839	
PE3	E-training provides curious material	0.815	
PE7	E-training creates a positive learning environment	0.810	
PE2	The content of the training contained in E-training at PT. SCI can be applied to my work	0.783	
	Career development		$\alpha = 0.942$
PK1	I can give the impression that I am more competent than I am	0.910	
PK4	I am afraid my co-workers will reject me if I climb the career ladder	0.893	
PK7	I feel confident taking on a leadership role	0.880	
PK2	I was worried when I was proposed for promotion because I did not know the requirements even though I wanted the position	0.867	
PK3	I hope I do not fail to meet the requirements	0.841	
PK6	I have a strategy to achieve my career goals	0.840	
PK5	Overall, I am satisfied with myself	0.806	

Source: Data processed by author

Based on Table 3, it can be seen that the exploratory factor analysis resulted in four factors, employee productivity (0.910); employee resilience (0.953); e-training (0.903); and career development (0.942). According to this study, items with a low factor loading value, namely PE1 (online training provided by PT. SCI according to my work), are dropped during the analysis.

4.3. Hypothesis testing

This research uses structural model equations. Based on the measurement model testing carried out previously, it resulted in the feasibility of being a fit model because the model has met the reliability and

construct validity tests. The previous model has gone through confirmatory factor analysis, where several items need to be dropped to reach the fit model.

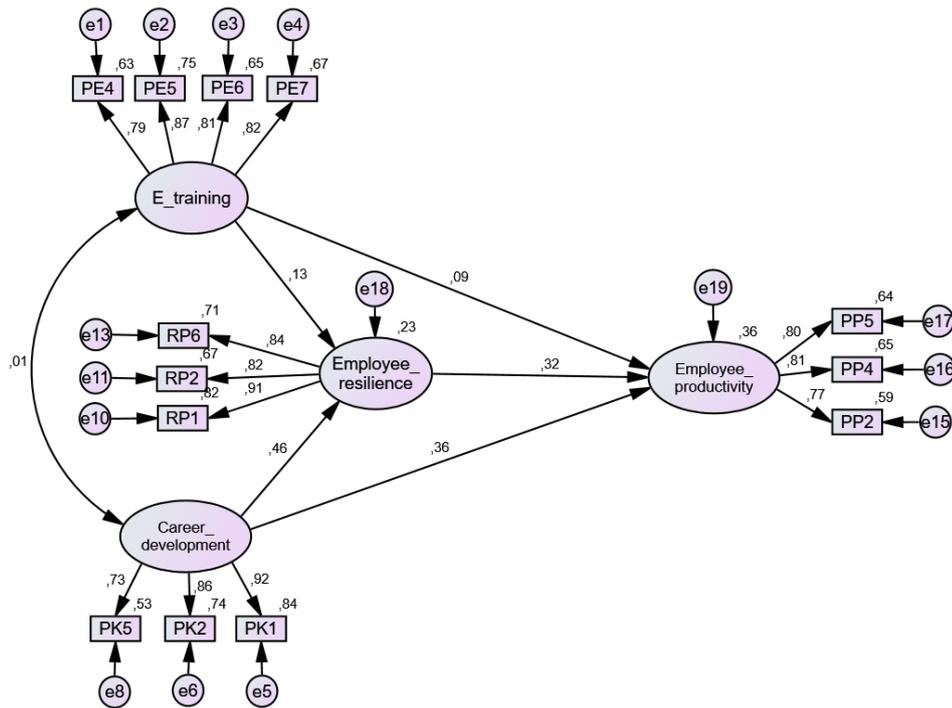


FIGURE 2. STRUCTURAL MODEL OF THE MODIFIED MODEL FIT

Source: AMOS output

Figure 2 shows the analysis of the modified structural model to produce a fit image according to the goodness of fit parameter criteria suggested by Hair et al. (2014). The results of the goodness of fit output can be seen in Table 4.

TABLE 4. OUTPUT GOODNESS OF FIT MODIFIED STRUCTURAL MODEL ANALYSIS

Criteria	Cut-off Value	Results	Remarks
<i>Absolute Fit Indices</i>			
DF	≥ 0	59	<i>over Identified</i>
Chi-Square (x ²)	≤ 77.930	73.070	<i>good fit</i>
Probability	≥ 0,05	0.103	
CMIN/DF	≤ 2 (<i>fit</i>)	1.238	<i>good fit</i>
GFI	≥ 0,90	0.959	<i>good fit</i>
RMSEA	≤ 0,08	0.030	<i>good fit</i>

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Criteria	Cut-off Value	Results	Remarks
RMR	≤ 0.05	0.019	<i>good fit</i>
<i>Incremental Fit Indices</i>			
AGFI	$\geq 0,90$	0.937	<i>good fit</i>
NFI	$\geq 0,90$	0.964	<i>good fit</i>
TLI	$\geq 0,90$	0.991	<i>good fit</i>
CFI	$\geq 0,90$	0.993	<i>good fit</i>
IFI	$\geq 0,90$	0.993	<i>good fit</i>
RFI	$\geq 0,90$	0.953	<i>good fit</i>
<i>Parsimonius Fit Indices</i>			
PNFI	$\geq 0,50$	0.729	<i>good fit</i>
PCFI	$\geq 0,50$	0.751	<i>good fit</i>
PGFI	$\geq 0,50$	0.622	<i>good fit</i>

Source: Data processed by author

Based on Table 4, it can be concluded that the modified SEM model in this study is good because all criteria show a good fit value. The Chi-Square value shows a value of 73.070 with a P-value of 0.103 (≥ 0.05). A small chi-square value with a probability greater than the significance level indicates no significant difference between the predictive covariance matrix and the observed data. Furthermore, the value of CMIN/DF is 1,238 (≤ 2), RMSEA is 0.030 (≤ 0.08), RMR is 0.019 (≤ 0.05). While GFI, AGFI, NFI, TLI, CFI, IFI, RFI, the value of all criteria has exceeded the cut-off value of 0.90. The value of the Parsimonious Fit Indices criteria, namely PNFI, PCFI, and PGFI, is already above the cut-off value of 0.50. So it can be concluded that the structural model analysis can be said to be good and can be continued to test the hypothesis.

Hypothesis testing is done by using a t-value at a significance level of 0.05. The test criteria are if the t-value or critical ratio (C.R.) is 1.96, then the hypothesis is accepted. The C.R. and P-values in this study can be seen in table 5.

TABLE 5. RESULT OF HYPOTHESIS TESTING

Hypothesis	Path	Estimate	C.R.	P	Results
H1	E-training → Employee Productivity	0.217	1.491	0.136	Rejected
H2	E-training → Employee Resilience	0.279	2.159	0.031	Accepted
H3	Career Development → Employee Resilience	0.611	7.273	***	Accepted

Hypothesis	Path	Estimate	C.R.	P	Results
H4	Career Development → Employee Productivity	0.537	4.856	***	Accepted
H5	Employee Resilience → Employee Productivity	0.369	4.500	***	Accepted

Source: Research findings, processed by AMOS

Based on table 5, it can be seen that H1 has a C.R value. 1.491 (≤ 1.96) with a probability level of 0.136 (≥ 0.05), it can be concluded that H1 is rejected, meaning that e-training does not affect employee productivity. Then the C.R. at H2 of 2.159 (≥ 1.96) with a P-value of 0.031 (≤ 0.05), the research hypothesis is accepted. Then the C.R. on H3, H4, and H5 each have a value of 7,273, 4,856, 4,500 (≥ 1.96) with the resulting P-value at $P \leq 0.05$, where the *** sign is significant $P < 0.001$ then the research hypothesis is accepted.

5. DISCUSSION

The results of the study show that e-training has no significant effect on employee productivity. Therefore the e-training is less effective in increasing employee productivity. These results are in line with research conducted by Mwangi and Reuben (2019). Their research results state that 58% of employees in organizations do not agree with e-training because they have not fully met the skills and expertise needs of employees. The results of this study are supported by research conducted by Ramayah et al. (2012) that self-efficacy, ease of use, and training content are not significant. In addition, Dutton et al. (2002) research shows that users feel dissatisfied with e-learning systems and do not continue their training. When employees feel dissatisfied and do not continue their training, the training will not impact their productivity.

There is a significant effect of e-training on employee resilience, which means the implementation of e-training can increase employee resilience. According to Emmanuella (2020), being a resilient employee is a skill that can be learned, trained, and formed. Singh and Mohanty (2012) support that investing in training can improve employee skills in decision making, teamwork, problem-solving and interpersonal relationships. In addition, training can also affect employee behavior and work skills, which results in increased employee performance and constructive change (Satterfield & Hughes, 2007).

Career development has a significant effect on employee resilience. The result is supported by Lyons et al. (2015), in their study that people who have their own career development goals are more resilient than those who do not have a thriving career, which means career development has a positive relationship

with resilience. Career advancement opportunities can help employees deal with the stress they experience (Khan et al., 2019). In other words, career development can increase employee resilience. The results of this study are supported by research conducted by Lyons et al. (2015) and Srivastava and Madan (2020) which states that career development has a significant influence on employee resilience. The results of this study state that there is a significant influence between career development and employee productivity. This result follows the statement of Massie (2015) that career development and training can encourage the achievement of the best employee performance to provide increased productivity in the company. Another study that supports the results of this study is the research conducted by Kelana et al. (2016), Chen et al. (2004) stated that career development has a significant effect on employee productivity.

The results of the study state that employee resilience has a significant effect on employee productivity. Another study that states that employee resilience has a significant effect on employee productivity is research conducted by Zehir and Narcikara (2016) and Saifudin (2018). Stress felt by employees can reduce employee performance, productivity, morale, and stretch relationships at work (White, 2011) because employees who experience excessive stress have difficulty managing emotions, focusing attention, making decisions, and thinking clearly. According to Spangler et al. (2012), here are three main approaches that are effective in dealing with stress and resilience in the workplace, namely (a) preventing distress and building resilience; (b) provide information, resources, and benefits to employees; and (c) actively intervene with problematic employees.

6. CONCLUSIONS AND RECOMMENDATION

Based on the results, it can be concluded that one hypothesis is rejected, and four hypotheses are accepted. Career development is the main factor that can increase employee productivity and employee resilience. The results of this study have important implications for policymakers to determine company strategies related to e-training, career development, and employee resilience to increase employee productivity. The results of this study can also expand the literature related to increasing productivity in the Survey Service SOE environment. Therefore, it can provide opportunities for future research.

It can be seen from the results of this study. It was found that the e-training variable had no impact on the results of the study. Further research can expand the research sample by including all survey service SOEs spread throughout Indonesia so that more optimal results can be found and can be generalized to areas wider.

This study proposes that companies must evaluate and improve the training system to make it more suitable for the needs of employees so that it can be applied to each employee's job or job desk but must

keep up with the demands of the times so that the company can compete globally. Implementing online training programs and career development carried out in the company must be further improved so that management can filter out superior human resources to be prepared as the next generation of the company.

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