

The role of employee engagement as a mediating effect in influencing corporate culture and human capital of defense industry

Erry Herman, Haryono Umar, Willy Arafah

Abstract

Based on the research model of the organization effectiveness variable which affected by three variables that is corporate culture, human capital and employee engagement. Furthermore, this research also identified the consequences of the importance of the organization effectiveness in the defense industry, PT Pindad Persero, PT Dirgantara Indonesia and PT Pal Indonesia Persero. A quantitative explorative techniques SEM/Lisrel 8.80. The data were collected from the leaders and the employees between ages of 18 to 50 years old, which represented the generation of X, Y and Z by random proportional sampling to obtain factors that can be estimated as the causes related to the suboptimal organizational effectiveness by the variables that affect it. The research has shown that organization effectiveness of defense industry need to improve an intangible resources, because intangible asset is difficult to imitate. It relates to the character, qualification, competency, creativity, commitment, teamwork and psychology and these asset can give positive impact to organization effectiveness. The centerpiece for transforming organization effectiveness is generation Y and Z as a strong point for developing corporate culture, human capital and employee engagement. The model proposed in this research shows the organization effectiveness related with three direct variables that is corporate culture, human capital and employee engagement. For the future, it is need to research the effect of organization effectiveness affected by other important variables such as integrity, level of trust technology and business intelligence/bigdata analytics. This research demonstrates that the organization effectiveness could reached with proper theoretical approaches by the researcher and manager for defence industry in order to apply corporate culture, human capital and employee engagement program.

Keywords: corporate culture, human capital, employee engagement and organization effectiveness.

Introduction

These days, public and private organization have faced a new challenge to reach its value added products caused by the rise of globalization. It is characterized by the uncertain and turbulence environment. Consequently, every organization has to embrace a continuous improvement in order to reach an organization effectiveness. Similarly, defense industries are trying to produce advance defense weapon system. In Asia country, such as, China, Japan, South Korea, Taiwan and Singapore defense industry capability have developed significantly. Defense Industry is a complex organization with high technology platform. In the future, Indonesia defense industries need to improve its effectiveness by benchmarking with other advance defense industries nation. Currently, defense industries in the world have changed the way they are doing business in order to adapt and respond the new environment. Diversification strategy, restructuring, downsizing, merger and acquisition strategy have done to streamline the organization. However, these strategies are not enough, while culture and employee have not grasped carefully. Therefore, the crucial prerequisite to develop an effective defense industry is transforming corporate culture, developing human capital and improving employee engagement.

The importance of organization effectiveness is expanding since the idea of Adam Smith and developed on Taylor's Scientific Management, then the concept of efficiency

and efficacy has introduced until 2000 afterwards. According to Nidhi (2019) the discrepancies view between scholar come up to the holistic concept. Oghojafor (2012) states that organization effectiveness is an ambiguous and complex concept. Sateesh V. Shet (2018) states it relates to organization goal, stakeholder and external environment. Thus, these complex concept have to deal with an appropriate parameter. The fallacies of parameter leads to the wrong judgment and conclusion. As a matter of fact organization effectiveness is a key for organization success to achieve its target and how far social system reach the goal. Effectiveness should be distinguished with efficiency, which it means the appropriate cost and outcomes, while effectiveness is the capability of organization to reach its goal. According Sateesh V. Sheet (2018) refers to Mott scale has defined the organization ability to activate the power center in terms of productivity, adaptation and flexibility. In other words, organization effectiveness should do the right thing in order to achieve a positive results. It represents the capacity of learning, adaptation and respond to market demand.

These are also other variable such as corporate culture, human capital and employee engagement in shaping organization effectiveness. Corporate culture is a complex, develop and vary. In business environment, it is related to human resource and a strategic asset. According to Duma and Cuganesan (2011) corporate culture in nature is an

intangible and crucial in business contemporary and it can be described as follows; upper layer can be observed in day to day basis such as norm and activities. The core layer is belief and value and it create an holistic concept as an corporate attribute or DNA as organization character. These attribute can accelerate risk taker attitude, ethics, strategic thinking, planning, professionalism, entrepreneurship and bureaucratic frame of mind.

According to Morita and Sugawara (2015) in knowledge economy era, globalization and revolution of information technology has put forward human capital approach to obtain innovation and competitive advantage. It shows knowledge is more crucial than others production factor such as land, capital and labor. Oviedo-Garcia (2014) states that knowledge is strategic resource to organization performance. Mention and Bontis (2013) elaborates human capital is a core element, formed by competency, knowledge, skill, experience, and capability. However, human capital is not only competency and its contribution to organization, but also to measure how knowledge can be implemented within organization. According to Ndinguri (2012) human capital is difficult to imitate, thus it so important to the organization. Massingham (2018) states turn over in organization leads to knowledge loss. Therefore, the productivity and capacity within organization has decreased significantly.

Organization effectiveness is correlate with employee engagement, which is defined as the level of commitment and employee involvement on organization and its value. According to Anitha J, (2014) employee engagement can offer positive result among employee, because the employee has a sense of responsibility and try to persuade other employee to do the best. Employee engagement can increase the level of commitment, motivation, job satisfaction and organization. Those positive emotion can lead to the performance, and even the employee can work beyond his responsibility. Byrne (2015) shows that employee work with passion and productive physically, cognitively and emotionally. According to Islam, Talat (2017) based on statistic data, there is only 13% employee working in enthusiasm and responsible. This is a very challenging task for any organization to dealt with uncertain business environment such as the complex working environment, the development of advance technology, automation and digitalization. All of these business environment need a solid team work.

The description of the effective defense industry PT Pindad Persero (Land Platform), PT Dirgantara Indonesia (Aerospace Platform) and PT Pal Indonesia Persero (Naval Platform) have shown the good progress, however, those defense industry have faced the daunting task and challenges in order to adopt, to research and to develop a state of the art technology. It can be argued that a tangible resources such as finance, operational, marketing, production, inventory and infrastructure are not enough without intangible resources

consideration such as human capital, corporate culture and employee engagement.

Hypothesis development

According to Amarjeev Kaul, (2018) strategy and corporate culture produce new model of business development. Strategy should be the driving force for every organization to be effective and culture is the foundation to reach legitimacy. Mahadevan (2017) shows the relationship between learning organization and leadership as an essential component which can shape a good commitment among employee. Golnaz, Sadri (2001) identifies culture can create value and wellbeing in working place. Lund, Daulatarm B (2003) describe corporate culture is relate to the employee commitment. Based on the research, it can be formulated the hypothesis.

H1: Corporate culture influence positively to employee engagement.

According to Benon Muhumuza, (2019) explains that human capital can improve employee engagement. Human is a valuable and can increase return on investment ROI in terms of cost and benefit and it affect a high output. It can influence employee to adapt any circumstances in working place easily. Baron, Angela (2011) elaborates human capital is a knowledge, skill and best practices and it can disseminate value in organization. Measuring human capital is not only to measure skill and its contribution to productivity but also to measure how knowledge translates into knowledge management. According to Wan, Hooi Lai (2017) human capital influence positively on employee engagement such as satisfaction in working place, productivity, profit, employee retention and customer satisfaction. Based on the research above, it can be formulated the hypothesis.

H2: Human capital influence positively on employee engagement.

Corporate culture as a strategic asset is very important because it relates on organization effectiveness. According to Kumaraguru Mahadevan, (2017) conceptual business process approach, called culture driven regeneration (CDR), it is a tool for managing change. Amir, Seyed (2014) states that business excellence BE as holistic capability offers an effective solution to increase organization effectiveness. According to Bolboli (2014) there is a relation between BE and culture for transforming an appropriate culture across organization. Jason von Meding (2013) examines relationship between stakeholder management and culture and its impact to organization in the long run. Flamholtz Eric G (2012) examine corporate culture, performance as a main factor of organization effectiveness. Based on the research above, it can be formulated the hypothesis.

H3: Corporate culture influence positively on organization effectiveness.

According to Mention, AL and Bontis (2013) in the long run, organization needs human capital strategy to improve workforce productivity in order to obtain higher value added. To accomplish this undertaking, organization will need to invest resources to ensure that employee have the information, skill and competencies and understand human capital development that would enhance employee satisfaction. Organization can reach positive results by inventing, managing, sharing and diffusing information and knowledge. Durrani, TS dan Forbes, SM (2003) states that organization effectiveness relates to human capital investment and information technology which considers human development as an educated and qualified employee. Vidotto, Juarez Domingos (2017) examines the relation between human capital and organization effectiveness are significant. Cortés, Enrique Claver (2015) states knowledge as intangible factor is significant factor to reach value and organization effectiveness. Muhammad Shahid Khan (2018) describes human capital is significant factor for gaining competitive advantage and economic growth. Based on the research above, it can be formulated the hypothesis.

H4: Human capital influence positively on organization effectiveness.

According to Islam, Talat and Tariq, Jawad (2018) examines employee engagement in relational derivative study, which it describes positive working environment and competitive advantage. The research study the relation between employee engagement and creativity which refers to extra-role behaviors. Anitha J. (2014) states that self-expression is psychology condition for organization effectiveness. Baumruk, R (2004) describes employee engagement is a strong energy for measuring organization. In general, a conducive working environment influences innovation and cooperation among employee. As a result organization become effective for focusing on goals, stakeholder satisfaction and connecting with external stakeholders. Based on the research above, it can be formulated the hypothesis.

H5: Employee engagement influence positively on organization effectiveness.

According to Zhang, Tanyu (2014) constructs employee engagement as multidimensional and it can affect corporate culture and organization effectiveness. According to Kahn (2010) who defined employee at work as the harnessing of organizational members' selves to their work roles, in personal engagement people employ and express themselves physically, cognitively and emotionally during role performances. Kahn deciding whether to engage in the workplace, people ask how meaningful it would be to enter into this performance. Flamholtz (2012) points out that culture is the total of the collective or share learning of the group as it develops its capacity to survive in its external environment and to manage its own internal affairs. The study of corporate culture and how cognitive and non-cognitive factors interrelate and intertwine

to influence behavior has been one of the most valuable for organization effectiveness. Based on the research above, it can be formulated the hypothesis.

H6 : Corporate culture influence positively on organization effectiveness through employee engagement as mediating effect.

According Islam, Talat (2018) employee engagement is multidimensional construct in terms psychology. The involvement of employee in working place is a reflection of human existential, whether the task can give job satisfaction and produce a vigor, dedication and absorption value. Moreover organization needs a competence employee which working with high creativity, productive and proactive. Thus employee engagement gives positive sentiment to create novelty with high enthusiasm. Baron, Angela (2011) measures human capital such as competency, qualification and creativity as intellectual and social capital for high performance which affect organization effectiveness. Ndinguri (2012) states that human capital is strategic factor in production as it represents the cognitive competencies, skill, relational behavior and knowledge of individuals that enhance productive output which it leads to organization effectiveness. Based on the research above, it can be formulated the hypothesis.

H7: Human capital influence positively on organization effectiveness through employee engagement as mediating effect.

Research design

The research is explorative to identify several factors to predict the causes and mechanism. It is also using design cross sectional with quantitative analysis, Sekaran, U., & Bougie, R. (2016). The endogenous variable is organization effectiveness. Exogenous variable is corporate culture and human capital and employee engagement as mediating variable. Data collecting techniques is using questioner with five points of likert scale such as 1 = strongly disagree and 5 very agree.

Sample: Sample is part of population with its characteristic. The method non-probability sampling/ non random sample of leader and staff level from three defense industry. First, PT Pindad Persero 351 consist of 100 leader and 251 staff. Second, PT Dirgantara Indonesia 434 personnel consist of 100 leader and 334 staff, Third, PT Pal Indonesia 260 personnel consist of 100 leader and 160 staff. The majority of respondent is generation Z, ages 18-30 years old in amount of 39, 8 %, generation Y ages 31-40 in amount of 34, 3% and generation X in ages 41-55 years old in amount of 25, 9%. Based on the analysis that has been done, the discussion of the hypothesis is conveyed as follows:

Structural Equation Model and Hypothesis

The full of SEM parameter λ (loading factor) measured by exogenous and endogenous model by Structural Equation

Population data:

No	Defense Industries	Composition
1	PT Pindad Persero (Permanent Employee)	2.506 personnel
2	PT Dirgantara Indonesia (Permanent Employee)	3.343 personnel
3	PT Pal Indonesia Persero (Permanent Employee)	1.039 personnel

Source: Defense Industry Assessment, 2018.

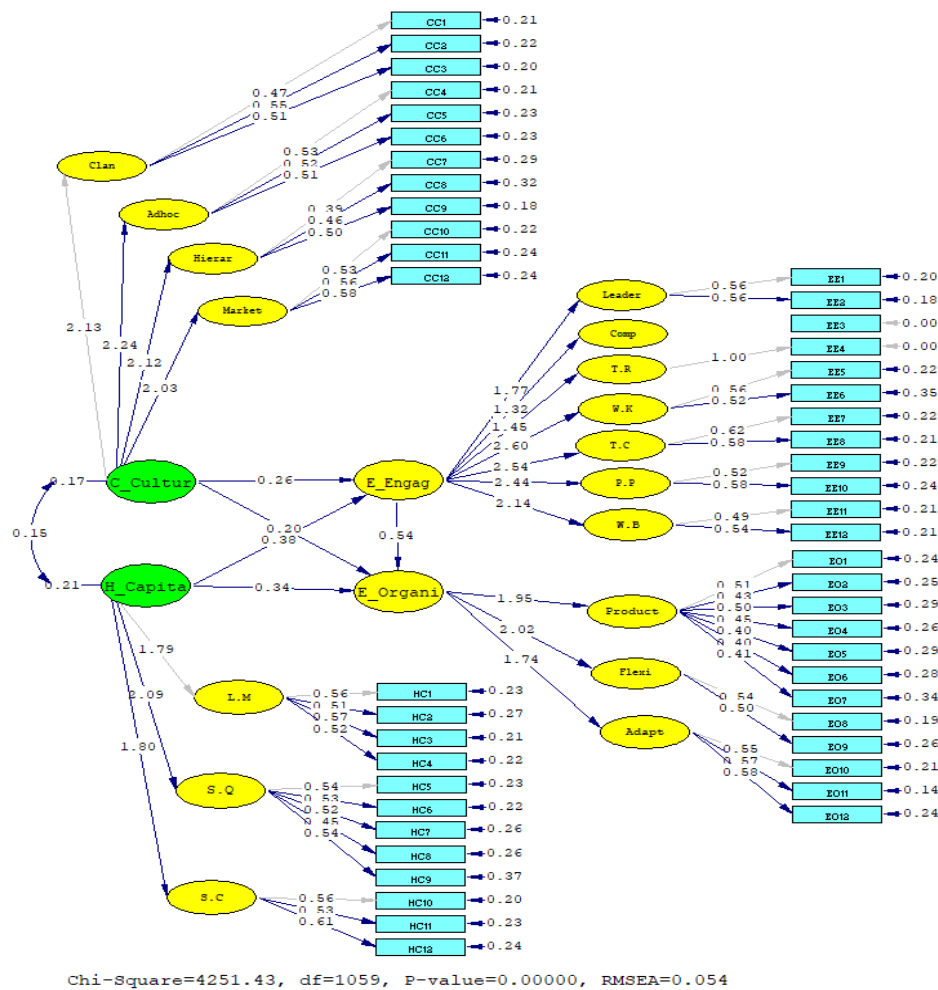
Modeling (LISREL) 8.80. The measurement is to identify the scale of indicator from each construct variable this analysis measures t-value and structural coefficient structural, whether t –value >1, 96. As a result t – value from parameter and estimation describe in three diagram as follow;

an information of estimation result and it can be evaluated causal relation and its influence on one variable to other variable as follows:

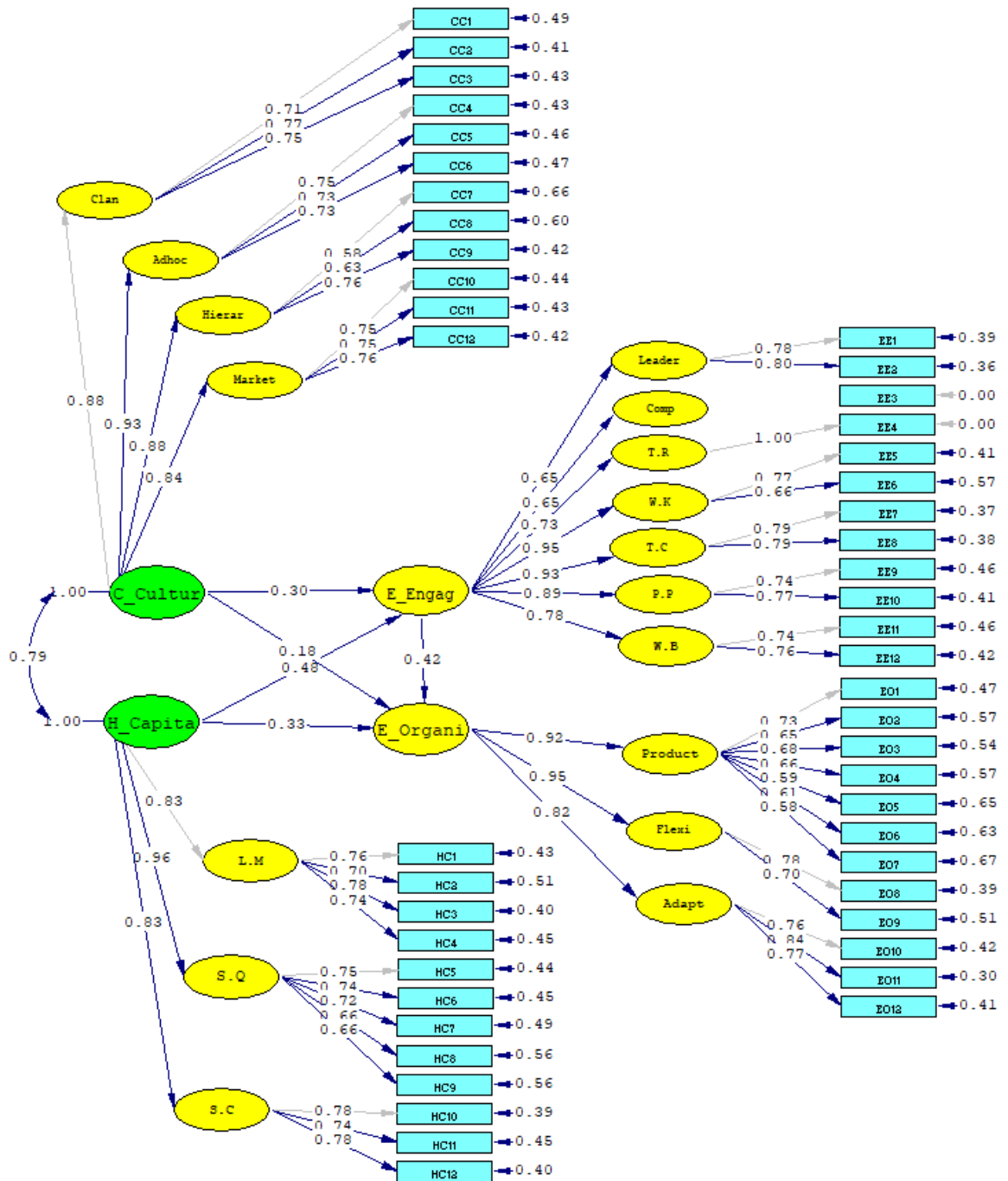
Summary

Based on structural model diagram, the hypotheses can be answered as follows, first, corporate culture influence

Based on three diagram above and model fit index have

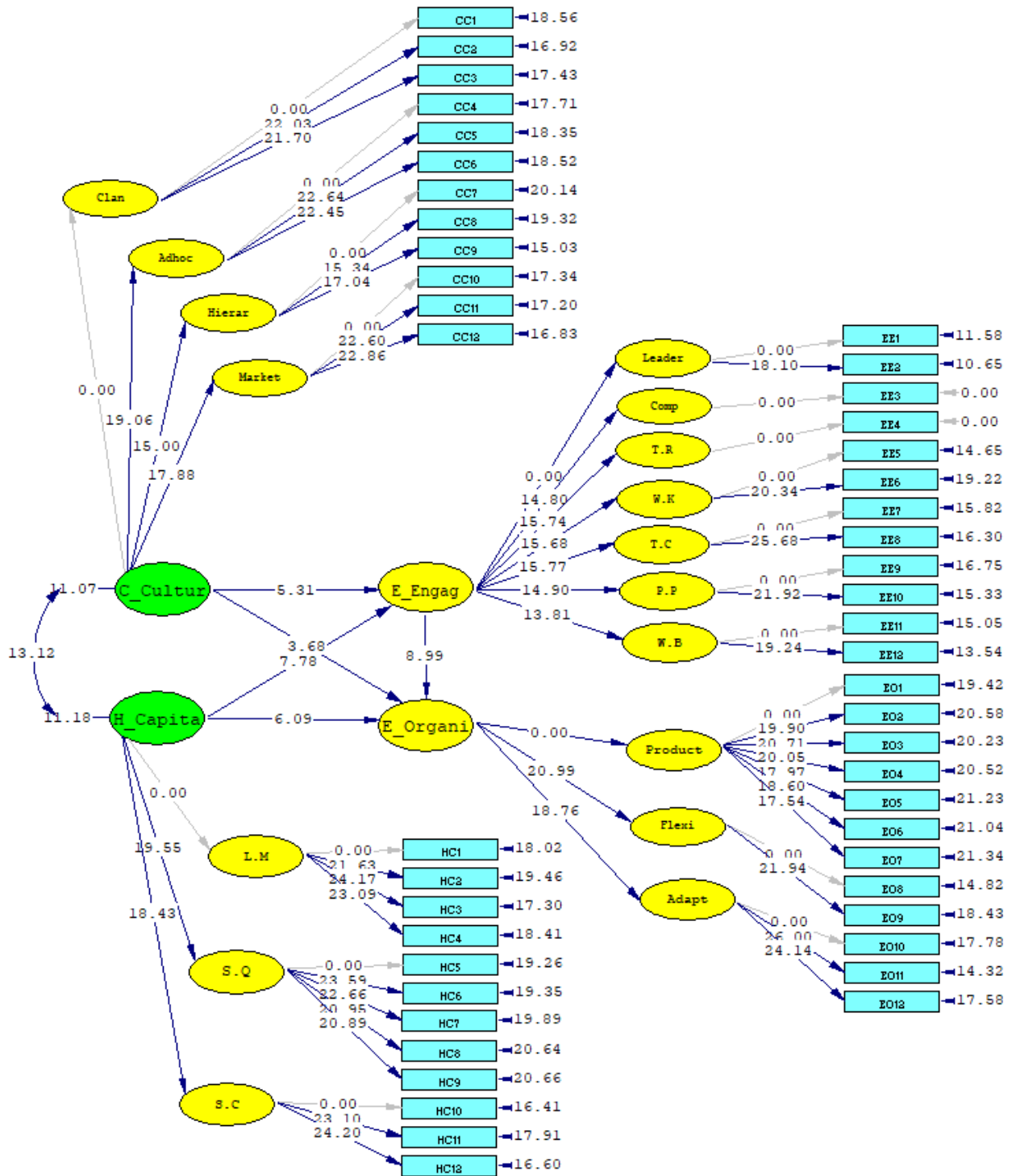


Gambar 4.5 Model Structural (Estimates)



Chi-Square=4251.43, df=1059, P-value=0.00000, RMSEA=0.054

(Standardized Solutions)



Chi-Square=4251.43, df=1059, P-value=0.00000, RMSEA=0.054

Structural Model (T Values)

Model Fit Index

Goodness of fit index	Criteria (cut-off value)	Result	Conclusion
X ² - Chi-square	small hoped	4251,43	
Significance probability	< 0,05	0,000	Model unfit
RMSEA	≤ 0,10	0,054	Model fit
NFI	≥ 0,90	0,97	Model fit
CFI	≥ 0,90	0,98	Model fit
IFI	≥ 0,90	0,98	Model fit
RFI	≥ 0,90	0,97	Model fit

positively to employee engagement. It indicates transformation of corporate culture can increase employee engagement. The organization should adopt appropriate clan, adhocracy, and hierarchy and market culture properly. These dimension can improve job satisfaction, commitment, cohesively and ability to execute strategy. The amount of corporate culture contribution to employee engagement is 26%. Second, human capital influence positively to employee engagement. It indicates human capital development relates to innovation, while organization should adopt good leadership, qualification and creativity among the employee. The amount of human capital contribution to employee engagement is 38 %. Third, corporate culture influence positively to organization effectiveness. It indicates the collections of value, belief, attribute of corporate culture are the basis of organization effectiveness. The amount

of corporate culture contribution to organization effectiveness is 20%. Fourth, human capital influence positively to organization effectiveness. Human capital dimension is important for all personnel level s, such as director, manager, line supervisor and technical staff, in order to adapt, adopt and protect knowledge in terms of knowledge management. The amount of human capital to organization effectiveness is 34%. Fifth, employee engagement influence positively to organization effectiveness. It indicates the improvement of employee engagement program can contribute significantly to organization effectiveness. This crucial asset give a positive impact to all personnel in terms of physically, cognitively and emotionally. These indicate positive working environment and interrelationship between employee and it follows other indicator. The amount of employee engagement contribution

Structural Equations			
E Engag = 0.26*C_Culture + 0.38*H_Capital, Errorvar.= 0.061 , R ² = 0.54			
(0.050)	(0.049)	(0.0076)	
5.31	7.78	8.03	
E_Organi = 0.54*E_Engag + 0.20*C_Culture + 0.34*H_Capital, Errorvar.= 0.064 , R ² = 0.71			
(0.061)	(0.056)	(0.055)	(0.0067)
8.99	3.68	6.09	9.56
Indirect Effects of X on ETA			
C_Culture	H_Capital		
-----	-----		
E_Engagement	--	--	
E_Organization	0.14	0.21	
	(0.03)	(0.03)	
	4.83	6.78	

The table below can be concluded as structural coefficient model evaluation :

Path	Estimation	t-value	Conclusion
Corporate culture → Employee Engagement	0.26	5.31 > 1.96	Accepted
Human Capital → Employee Engagement	0.38	7.78 > 1.96	Accepted
Corporate Culture → Organization Effectiveness	0.20	3.68 > 1.96	Accepted
Human Capital → Organization Effectiveness	0.34	6.09 > 1.96	Accepted
Employee engagement → Organization effectiveness	0.54	8.99 > 1.96	Accepted
Variabel	The amount of influence		
	Direct	Indirect	T Value
Corporate Culture	0.20	0.14	Employee engagement t = 4.83 > 1.96 Accepted
Human capital	0.34	0.21	Employee engagement t = 6.78 > 1.96 Accepted

to organization effectiveness is 54%. Sixth, corporate culture influence positively to organization effectiveness through employee engagement as mediating effect, this hypothesis is a novelty compared to previous research and the result is employee engagement can increase both corporate culture and organization effectiveness, because positive feeling among the employee can boost a performance. The contribution is 14%. Seventh, human capital influence positively to organization effectiveness through employee engagement as mediating effect, this hypothesis is also a novelty compared to previous research and the result is employee engagement can increase both human capital and organization effectiveness, because positive feeling among the employee can boost innovation and creativity. The contribution is 21%.

The research has shown that organization effectiveness of defense industry need to improve a intangible resources, because intangible asset is difficult to imitate. It relates to the character, qualification, competency, creativity, commitment, teamwork and psychology. These asset can give positive impact to organization effectiveness. The centerpiece for transforming organization effectiveness is generation Y and Z as a strong point for developing corporate culture, human capital and employee engagement. There are several recommendations to the managerial for optimizing leadership and managerial aspects, as follows; First, Organization Effectiveness. Maintaining (flexibility and quality of product); Improving (adaptation in every situation). Second, Corporate Culture. Maintaining (cohesiveness and teamwork); Improving (leader as administrator, mentor and facilitator, order, flexible and risk taker). Third, Human Capital. Maintaining (job competency, learning each other); Improving (leadership skill - visionary, inspiratory, motivator. Human capital development program should adapt new challenge.). Fourth, Employee Engagement.

Maintaining (good relationship among co-worker, colleague and leader); Improving (Clean and complete working environment and infrastructure, compensation scheme, career path, transparent recruitment).

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