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## The Impact of Human Capital on Employee Performance in the Automotive Parts Industry in Thailand

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### Abstract

This research aims to study the impact of human capital on employee performance in Thailand's automotive parts industry. The samples consisted of 202 production supervisors of the automotive parts industry in the Eastern Economic Corridor (EEC). The statistics used in the data analysis include structural equation modeling (SEM). The findings showed that human capital can be divided into three components: working capabilities, working knowledge, and working skills. This has a direct and positive impact on employee performance in terms of working behavior and efficiency. In addition, the variance of working behavior is explained by human capital with a percentage of 97%.

*Keywords: Human Capital, Employee Performance, Automotive Parts Industry*

### Introduction

The automotive parts industry has been growing in parallel with Thailand's automotive industry for more than 50 years and has been one of the automotive industry supply chains that are supported by the government's intention to promote the whole segment of automotive parts. Furthermore, Thailand has been placed in the front row among leading automotive parts manufacturers across the globe under the Thailand 4.0 economic model, which is targeted to push Thailand to be wealthy and sustainable. Establishing a workforce that specializes in the automotive parts industry is a significant factor to help support the expansion and development

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of the automotive parts manufacturing industry with the aim of growing and competing in long run. Human capital effectiveness is also a significant element to drive this industry and develop the country (Industrial Estate Authority of Thailand, 2012). To the extent that the workforce has high human capital effectiveness, it has the potential to stimulate production effectiveness as well as other factors in the whole economic system since human capital has been recognized by various organizations as being an essential resource to help business achieve goals or fail. It is a unique resource that no one can imitate. Human capital is an intangible asset in human beings and it is caused by efficient molding of knowledge, skills or proficiency, attitudes and personal behavior. These become potential and abilities leading to a practice of creating value and advantages over competitors in an organization. It is vital to strengthen human capital because human capital consists of individual ability arising from the knowledge and experience that result in the practice of driving success (Kulvisaechana, 2005; Jansawang & Prombutara, 2019). An increase in human capital generates growth in productivity and work efficiency. Investment in human capital not only achieve returns, but is also the ability development in working of officers in an organization. Besides, it provides motivation for officers and develops their confidence that they shall achieve improvement and progress in their lives (Chaiburee, 2019). Similarly, Bae (2014) stated that investing in human capital with education, training, and work experience cause human capital development of employees, and brings about an improvement of working performance.

Moreover, humans are considered to be a significant resource of an organization. Human beings are different from other types of resources because they are living resources, and they cannot be instructed if they are not satisfied. Thus, motivation needs to be created to bring them satisfaction in order to push behavioral expressions, creativity, attempts, commitment to success and empowerment of employees, and these cannot be overlooked. When employees' human capital is enhanced, this gives them the satisfaction of having good feelings about their leader and organization. Also, it has an impact on their attempts to complete their assignments and attain their predetermined specific goals (Kanatha & Inkum, 2016). Enhancing the performance of employees in an organization to have comprehensive knowledge, comprehension, skills, and attitudes can change employees' behavior for the better until becoming an important force in the development of the organization for sustainable success (Sanamthong, 2019). Therefore, it can be concluded that the human capital potential of employees has a relationship with work performance and changes in working behavior according to organization's expectation. This becomes a key factor in leading the organization to success as defined. Regarding the Thai

industrial sector, the research of Pholphirul and Rukumnuaykit (2015) revealed that there is a qualitative labor shortage, especially in basic skills, and it negatively affects labor productivity in the country. This is in line with the findings of Meedecha, Chandprapalert and Thanatawee (2017). They found that the labor shortage in the aspect of knowledge and skills in work has a negative relationship with labor productivity thereby undermining the Thailand 4.0 policy of leading the country toward stability, prosperity and sustainability through innovation. This policy faces challenges and impacts on the industrial sector, specifically the automotive and automotive parts industry. It is one of the ten industries of the country's development in which electric vehicles (EVs) are produced, which necessitates the use of complex and high technology of parts and equipment (Government Savings Bank Research, 2019). Therefore, the preparation of employees in the automotive parts industry is done to enhance employee's potential corresponding with changes that are going to occur in the future, including changes in the structure of production, higher technology utilization, and investment promotion policy for EV production. The current study aims to investigate the impact of human capital on employee performance in Thailand's automotive parts industry. The results of the study may provide guidance for the automotive parts manufacturing industry in planning to assist human resource development to work more efficiently. Comparatively, it can be used as a guideline in defining qualifications for recruitment as well as recruiting candidates who have the potential for meeting the organization's needs.

## **Research Objective**

The objective of this research is to study the impact of human capital on employee performance of the automotive parts industry in Thailand.

## **Literature Review**

### **Human Capital Concept**

Human capital is caused by the crystallized intelligence, abilities, and skills of each individual until it becomes potential and abilities leading to the practice of bringing success (Jansawang & Prombutara, 2019). Human capital refers to the knowledge, skills, and abilities of human beings that they have had naturally since birth, and it is the result of learning and broadening experiences (Pinkesorn, Kittisaknawin, & Kongklai, 2017). The combination of knowledge, abilities, skills, and expertise creates organizational potential, and it is considered to be an important and valuable resource. This gives the organization advantages over competitors

(Chaiburee, 2019; Kongkasawad, 2007). Accordingly, it can be summarized that human capital is the accumulation of knowledge, abilities, skills or expertise through learning, developing or past experiences of each individual, and it becomes potential leading to a practice. In addition, it is able to establish and develop organizational potential which triggers a practice as well as creating and developing organizational potential for achieving success and gaining an advantage over the competitors.

According to the literature review, it is found that the main components creating human capital comprise knowledge, skills or expertise, and capabilities that are accumulated in each individual. It has been instructed until it becomes the potential of human capital that can add value to the organization in the form of new knowledge and work performance responding to the organization's objectives. Nevertheless, employees need to have knowledge, abilities, skills or expertise that is appropriately expressed and conformed to the responsibility for operation managing to attain organizational goals (Fukitkarn, 2019; Sangjun & Limpsurapong, 2014). For the present study, the researcher has indicated the three parts of human capitals that are significant and necessary for work performance as follows:

1. Working capabilities means showing individual's potential appropriate and necessary behavior in working. It is created by knowledge, skills or expertise in their duties until it produces work that meets the organization's goals. The behaviors that show individual's efficiency and ability to work accomplishing the organization's goals consists of the ability to plan production, to improve activities supporting the production process, product quality, and product cost reduction. It also includes the ability to work with a team, to strictly perform according to the organization's rules and regulations, to extend knowledge, and to understand changes that have effects on operation and organization's image. Furthermore, it comprises self-management, work management, and time management, as well as creating a work-life balance (Phuwittayapan, 2010; Fukitkarn, 2019; Slocum, Jackson, & Hellriegel, 2008).

2. Working knowledge means memorizing and apprehending information and facts derived and being able to interpret, predict, explain, analyze and differentiate several things which information is organized in the knowledge of individual intelligence. It probably results from formal education, non-formal education, self-learning through various channels, and general and useful information for working, such as product details, working procedures, work operation, working equipment, and the standards involving in working. It can be utilized in the work as well as effectively solving the problems incurred while carrying out their responsibilities (Fukitkarn, 2019; Kongkasawad, 2007; Buaplanssee, 2018).

3. Working skills means the expertise in showing or working that is necessary for competent job performance. It is caused by learning, training and accumulating experience in order that the individuals can work in their roles and carry out their responsibilities appropriately, actively and effectively. Moreover, it must conform to the organization's orientation and goals, and it can be ascertained and verified through job performance, in which the important skills for working consist of problem solving and coaching skills, English skills, and information technology skills (Khaejoranan & Samerjai, 2004; Pholphirul & Rukumnuaykit, 2015).

3.1 English skills refer to the proficiency of English usage in the workplace, such as reading, writing and verbal communication. English skills combine effective English writing with key message coverage, understanding the English message after reading and being able to comply with the message correctly, communicating with colleagues or foreigners effectively and coordinating with domestic and international organizations.

3.2 Problem solving and coaching skills refer to data analysis that relates to how to make a decision when there is a problem happening. It also combines initiatives and new working techniques to improve working effectiveness. The transfer of data, coaching and work-related negotiation are also counted as a crucial part of achieving the set goals.

3.3 Information technology skills refer to the expertise in applying technological skills to improve the production process, using the Internet and company networks to work and utilizing computer programs to enhance working effectiveness.

### **Employee Performance**

Employee performance is a key factor in an organization's success (Khan & Imtiaz, 2015). Performance refers to performance results assigned by administrators, and it is employed in assessing the success and reward recognition of work evaluated by the ability to complete assigned work with having good benefits to an organization. It also includes behavioral expression measurement (Injai, Panyadee, Kaewtip, Traisaeng & Vongverapant, 2018). To work efficiently, performance can serve as an indicator for giving feedback on employee performance, which comprise both performance results based on assigned duties and behavioral expressions supporting the performance of duties in order to achieve predetermined organizational goals. According to the literature review concerning performance indicators from scholars, namely Phuwittayapan (2006); Asfaw, Argaw, and Bayissa (2015); Pawirosumarto, Sarjana, and Gunawan (2017), it can be concluded the indicators of employee performance in the two aspects are as follows:

1. Working behavior can be defined as the ability to work independently without control by administrators, devotion to completion of the work, confidence about working to accomplish goals, and the ability to complete work within the specified timeframe.

2. Working efficiency means the ability to work according to working standards set for employees by the organization, completing the work with fewer errors, and earlier than the specified standard time, decreasing the quantity of defects that occur during production, performing work that contributes to lower production costs, and task satisfaction.

### **Association between Human Capital and Employee Performance**

Human capital created through accumulated knowledge, skills or expertise, the ability of learning, training and development, along with previous experience results in creating added value, encouraging employees to work efficiently according to predetermined goals, and creating value leading to the development and growth of the organization (Charoenroop, Wangrai, & Shupkulmongkol, 2017). However, this study explores the association between the variables, namely human capital, working behavior, and working efficiency. The researcher has been reviewing relevant literature about enhancement of human capital potential through various development activities in order to formulate hypotheses and conceptual framework in the study as follows:

#### 1. Human capital and working behavior

The research of Wungtong (2015) related to human capital and working behavior revealed that the personnel who received training had positive changes in behavior, leading to constructive change in the organizations. Wedchayanon (2016) found that trainees were able to apply their knowledge gained from training in their work. Mostly, it was for the one that matched with their own responsibilities. With regard to alteration of behavior, the trainees had better performance, more knowledge integration, more confidence in making decisions, and improved leadership skills. Channar, Talreja, and Bai (2015) indicated that human capital is the knowledge, skills, and experience of employees generated by human capital development that is positively associated with employee satisfaction. It has effects on organizational operation. In short, human capital has an influence on working behavioral performance, suggesting the first hypothesis:

Hypothesis 1: Human capital has a positive direct effect on working behavior

#### 2) Human capital and working behavior and working efficiency

The research of Zeb, Abdullah, Javaid, and Khan (2017) regarding human capital and working behavior and working efficiency, suggested that human capital had a significant and essential role in employee's working efficiency. It was noted that the knowledge and skills of

employees were received through training and development, while employees' abilities were acquired from recruitment and selection, reliance, confidence, devotion, and intention. There was a strong relationship with employee working efficiency. Yaya (2016) demonstrated that human capital development had a significant effect on the job satisfaction and working efficiency of librarians. Developing knowledge, good leadership patterns, and human capital programs enabled employees to have job satisfaction and to enhance their working efficiency. Babalola and Nwalo (2013) reported that job motivation had a considerable influence on working efficiency. Hoboubi, Choobineh, Ghanavati, Keshavarzi, and Hosseini (2017) showed that recognizing job stress and job satisfaction of employees had a powerful effect on the working efficiency of employees. Although job stress had no association with job satisfaction, job satisfaction had a positive relationship with employee working efficiency. Thus, management ought to promote the importance of reducing stress and increasing job satisfaction so that employees could work more efficiently. In brief, human capital has a positive influence on working efficiency through working behavior, resulting in the second hypothesis:

Hypothesis 2: Human capital has a positive effect on working efficiency through working behavior

### 3) Human capital and working efficiency

According to the research of Sawangrat (2018), human capital developed by factors relating to recruitment and selection, development and training, performance evaluation, pay and benefits had a significant impact on enhancing employee working efficiency. For instance, errors in job were diminished, and product quality was improved. Damsakorn, Wangmahaporn, and Suthichai (2019) noted that the enhancement of human capital caused the staff to improve themselves and to work more efficiently. Correspondingly, Chidozie and Chukwuma (2016) revealed that promoting human capital development had a positive association with employee' work performance quality. Enhancing human capital through on-the-job training led to improved efficiency of employee's performance. Also, Bae (2014) suggested that human capital investment which consisted of education, on-the-job training, and working experience created human capital development of employees, causing employee performance improvement. In summary, human capital has an influence on working efficiency. This leads to propose the third hypothesis:

Hypothesis 3: Human capital has a positive direct effect on working efficiency

## **Research Methodology**

**Scope of Content and Area:** The variables used in the present study are classified into three groups as follows: 1) The independent variable, namely human capital. This comprises working capabilities, working knowledge, and working skills. 2) The mediator variable, namely working behavior. 3) The dependent variable, namely working efficiency. The Eastern Economic Corridor (EEC) area, including Chonburi, Rayong, and Chachoengsao was selected in this study because it is the location of basic industries, including the auto parts industry which plays an important role in developing the economy of the country.

**Population and Sampling:** The population is comprised of production supervisors from automotive parts industry in the EEC, which includes 14 industrial estates and 680 companies located in Chachoengsao, Chonburi and Rayong (Industrial Estate Authority of Thailand, 2019). Unfortunately, since there is no actual number of production supervisors, the researcher then decided to set the population number at 680. The samples of this research consist of production supervisors from the automotive parts industry in EEC. This research was conducted using Structural Equation Modeling (SEM). The sample size of 390 was determined using the Rule of Thumb technique, which states that there should be at least 100 samples or 10 times the number of observatory variables (Hair, Black, Babin, & Anderson, 2014). There are 39 observatory variables in total in this research and, therefore, there are 390 samples from this sampling group when using the 10:1 ratio. Selecting a sampling group using stratified random sampling based on the population proportion will help get the desired sampling group (Soonthonsmai, 2013).

**Research Instrument:** A questionnaire was created under the theoretical construct and was research-related. A five-point Likert scale was used with the responses ranging from low to high (1-5).

**Instrument Quality Validity:** In order to examine the content validity, the researcher asked five experts to review the extensiveness and validity of the content, and appropriateness of the languages used. After this, the researcher proceeded to use the Index of Item-Objective Congruence (IOC) by utilizing the congruence measurement score of 0.50. The results show that 39 questionnaire samples regarding production supervisors' opinions have an IOC of more than 0.5, which means that all the questions passed under the congruence standard. Regarding reliability, the researcher tried out the verified content validity questions approved by the experts with a sample sampling group of 30 participants in order to analyze the reliability of Cronbach's Alpha Coefficient. The reliability value should be more than 0.70 (Vanichbancha &



Vanichbancha, 2015). The reliability analysis in the questionnaire of more than 0.70 is equal to 0.95, which shows that all questions are reliable.

**Data Collection:** The researcher proceeded to collect data with production supervisors in automotive parts industry in EEC with 390 questionnaires. 202 participants responded to the questionnaires in total.

**Data Analysis:** The researcher had the data collected from the questionnaire processed by means of SEM. Before proceeding with SEM, the researcher validated the data collected for Construct Validity by means of Exploratory Factor Analysis (EFA)'s principal component analysis and Varimax. The human capital variable consists of 27 observatory indicators with KMO marks at 0.88, which are higher than 0.50. Bartlett's Test has a statistical significance at a level of 0.05, which has a Chi-Square of 2119.83 and Sig of 0.00 ( $p < 0.05$ ). In addition, the factor loading and Eigenvalue are between 0.49 and 0.85, and 1.24 and 12.45 respectively, which are higher than 3.00 and 1.00 (Hair et al, 2014). Thus, the human capital model of automotive parts industry in EEC with 27 observatory indicators is quite suitable and rational for analyzing the components and this can explain the human capital component. Human capital can be categorized into 5 components as shown in Table 1

**Table 1** Components of Human Capital

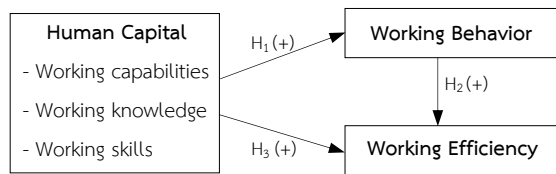
Factor	Name of Component	Number of Observed Variables	Eigenvalue	Component Weigh
1	Working Capabilities	10	12.45	0.51 to 0.78
2	Working Knowledge	5	2.20	0.65 to 0.83
3	English Skills	4	1.97	0.53 to 0.85
4	Problem-solving and Coaching Skills	5	1.43	0.49 to 0.76
5	Information Technology Skills	3	1.24	0.69 to 0.80

The employee performance variable consists of 12 observatory indicators with KMO marks at 0.88, which are higher than 0.50. Bartlett's Test has a statistical significance at a level of 0.05, which has a Chi-Square of 838.09 and Sig of 0.00 ( $p < 0.05$ ). In addition, the factor loading and Eigenvalue are between 0.56 and 0.85 and 1.30 and 6.65 respectively, which are higher than 0.30 and 1.00 (Hair et al, 2014). Thus, the employee performance model of the automotive parts industry in the EEC with 12 observatory indicators is quite suitable and rational for analyzing the components and this can explain the components of employee performance. Employee performance can be categorized into 2 components as shown in Table 2

**Table 2** Components of the Employee Performance

Factor	Name of Component	Number of Observed Variables	Eigenvalue	Component Weigh
1	Working Effectiveness	8	6.65	0.64 to 0.80
2	Working Behavior	4	1.30	0.56 to 0.85

According to EFA and literature reviews from various scholars, the researcher operates the model of human capital that impacts on employee performance in the automotive parts industry in Thailand as shown in Figure 1.



**Figure 2** Model Development of Human Capital Impact on Employee Performance in Thailand’s Automotive Parts Industry

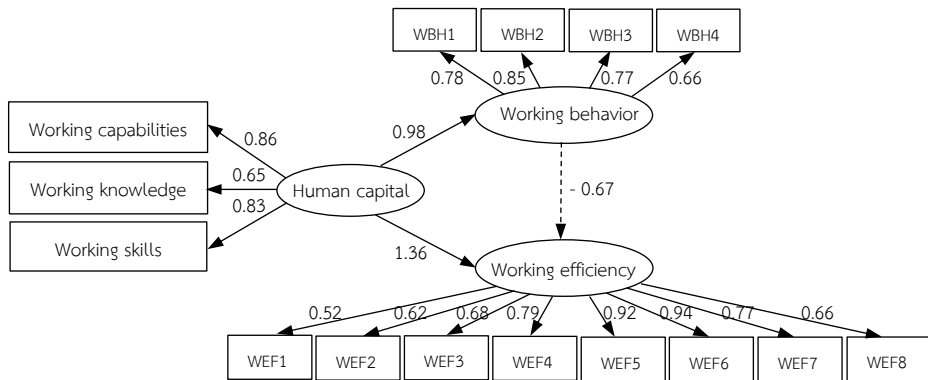
**Research Results**

1. The profiles of the 202 respondents of the study demonstrated that 68.80% of respondents were male. 52.50% of the respondents had an education that was Non-Bachelor’s Degree, followed by those with a Bachelor’s Degree, which comprise 38.60%, and the lowest percentage of respondents (8.90%) had a Master’s Degree. Finally, 7.90% of respondents had less than 5 years of working experience, while 37.60% of them had 10-15 years of working experience, followed by 29.20% who had 5-10 years of working experience, and 25.20% who had more than 15 years of working experience.

2. Human capital indicators are measured by three factors, consisting of working capabilities, working knowledge, and working skills. As regards the working capabilities aspect that combines 10 observatory indicators, it was found that the respondents strongly agree with working well in a team environment ( $\bar{X}$ =4.28) and strictly following the rules and regulation of the organization ( $\bar{X}$ =4.21). As regards the working knowledge aspect combines 5 observatory indicators, it was found that the respondents strongly agree as regards workflow understanding ( $\bar{X}$ =4.25). Regarding the working skills aspect, which combines 12 observatory indicators, it was found that the respondents strongly agree about coaching employees to understand how to

work efficiently ( $\bar{X}$ =4.21). The employee performance indicators are measured by two factors consisting of working behavior and working efficiency, which all of the means are agree level. In term of working behavior that combines 4 observatory indicators, it was found that the respondents strongly agree about staying focused on finishing the tasks successfully ( $\bar{X}$ =4.29) and confidence to work and accomplish the goal ( $\bar{X}$ =4.21). For the working efficiency aspect that combines 8 observatory indicators, it was found that the respondents strongly agree about working efficiently to meet the organization’s targets ( $\bar{X}$ =4.06).

3. The results of SEM analysis of the impact of human capital on employee performance in the automotive parts industry are displayed in Figure 2 and Table 3



$\chi^2=189.56$   $df=69$   $\chi^2/df=2.75$ , GFI=0.90, NFI=0.92, TLI=0.92, CFI=0.95, RMR=0.02, RMSEA=0.09

Figure 2 Model of the Human Capital Influencing on Employee Performance

Table 3 Statistics of Structural Equation Modeling (SEM)

Independent Variable	Human capital			Working behavior			$\beta$ (S.E.)	R-square
	DE	IE	TE	DE	IE	TE		
Working behavior	0.98* (0.00)		0.98*(0.00)	-	-	-	0.98*(0.08)	0.97
Working efficiency	1.36* (0.04)	-0.65 (0.28)	0.71* (0.01)	-0.67 (0.28)	-	-0.67 (0.28)	1.36 (1.38)	0.52
Statistics	$\chi^2/df = 2.75$ , GFI = 0.90, NFI = 0.92, TLI = 0.92, CFI = 0.95, RMR = 0.02, RMSEA = 0.09							

\*p < 0.05

Figure 2 and Table 3 show that the analysis outputs of the impact of human capital on employee performance in the automotive parts industry consist of three latent variables with only 15 total indicator variables. Testing of the model’s goodness of fit indicated that all index goodness of fit model structured is appropriate. It could be reinforced with  $\chi^2/df = 2.75$ , GFI=0.90, NFI=0.92, TLI=0.92, CFI=0.95, RMR=0.02, and RMSEA=0.09, which confirmed enough

strength to accept the model's goodness of fit (Hair et al., 2014). For influence analysis of the human capital impact on employee performance show that human capital has a direct and positive impact on working behavior with the effect size of ( $DE=0.98$ ) at a statistical significance of 0.05. This implies that enhanced human capital effectiveness in production supervisors positively impacts the working behavior of production supervisors in Thailand's automotive parts industry. Hypothesis 1 is confirmed. And human capital also has a direct and positive impact on working effectiveness with the effect size of ( $DE=1.36$ ) at statistical significance of 0.05 level. This implies that enhanced human capital efficiency in production supervisors positively impacts the working effectiveness of production supervisors in Thailand's automotive parts industry. Hypothesis 3 is confirmed. Whereas human capital does not impact working efficiency through working behavior with the effect size of ( $IE=-0.67$ ) at statistical insignificance of 0.05 level. This implies that working behavior is not a central factor to impact on the working efficiency of production supervisors in Thailand's automotive parts industry. Hypothesis 2 is not confirmed. In addition, it was found that the highest variance that can explain the human capital influence is the variance of the working behavior of production supervisors in Thailand's automotive parts industry at 97%.

## **Discussion**

Human capital is an asset that cannot be easily imitated since it takes time to create. Human capital is created by crystallized intelligence, abilities, and skills derived from education, training and development or previous experience until it becomes potential leading to value creation and goal achievement. Based on the study of the influence of human capital on employee performance, such performance served as an indicator for the results achieved in carrying out assigned duties, together with the behavior that supports working to accomplish predetermined organizational goals (Phuwittayapan, 2006). According to the study, human capital had an effect on work behavior that brought benefits to an organization. It might be because employee's accumulated skills, knowledge, and abilities help employees to have confidence in work and devotion to duty. Moreover, when the personnel are developed their own human capital, it produces job satisfaction and creates a good attitude towards leaders and organizations. This has an effect on doing work with a lot of effort to complete defined goals (Khanatha & Inkhum, 2016). Likewise, the study of Zeb, Abdullah, Javaid, and Khan (2017) found that human capital of employees who obtained efficient management support through development activities such as training, development, and performance evaluation had

a significant relationship with employee performance, especially for generating confidence and motivation to reach predetermined goals. Obviously, confidence, devotion, competence, and endeavor to complete work are regarded as working behavior providing good benefits for organizations (Chen & Francesco, 2003). Moreover, the result of the study indicated that human capital had an effect on employee working efficiency. This is probably because human capital created by means of education, training, development, and past experience enhanced employees' human capital, so employees could work more efficiently. This is supported by the research of Sawangrat (2018), which found that human capital effectiveness of employees is enhanced by human resource management promotion, such as recruitment and selection, development and training, performance appraisal and salary and benefits, which have an impact on employee working effectiveness in terms of reducing defects and enhancing production quality. Moreover, the study conducted by Bae (2014) and Dumsakorn, Whangmahaporn, and Sutthisai (2019) found that human capital investment by means of education, work training or previous working experiences can encourage employees to improve themselves so that they can work more effectively.

The results also suggest that employee performance is not a mediator variable between human capital and employee performance enhancement. Although human capital accumulated in employees is one of the factors creating motivation among employees to show performance according to the organization's need, such as devotion to work and intention to accomplish assigned work (Inluang, 2018), errors in work can be found if employees feel that that work does not have importance and value to themselves. In cases where employees feel that their own value is being impaired or destroyed, they might show protest behavior in several ways which could lead to violent behavior (Khejaranan, 2008). This is in line with the study of Hoboubi, Choobineh, Ghanavati, Keshavarzi, and Hosseini (2017), which demonstrated that stress recognition in work has an impact on employee working efficiency. Nevertheless, behavioral expressions of employees cannot be disregarded since behavioral expressions regarding work have benefits to an organization. That is, such behavioral expressions are among the indicators used to measure success at work. Changing behavior for the better usually enhances work effectiveness and causes improvements in an organization (Wangtong, 2015).

**Suggestions**

1. The first suggestion is to apply the research result, according to the finding that enhanced human capital has a positive impact on working behavior and effectiveness. Therefore, human resource executives must continuously encourage production supervisors' development in the automotive parts industry, in order to optimize the human capital efficiency of production supervisors for working more effectively. In particular, the organizations should give priority to working capability development because it has the most components, such as the capabilities of production planning, improving activities that support the production process, enhancing the production quality, and reducing production cost, as well as teamwork ability, strictly following regulations of the organization, acquisition of new knowledge, understanding environmental changes, work assignments, and work-life balance to make the workflow more effective. In addition, the organizations should focus on improving the working skills of employees, especially in terms of English communication skills that are used to coordinate with internal and external sectors, problem-solving and coaching skills to improve working effectiveness, knowledge transfer, working negotiation, and information technology skills to apply in the production process, in order to improve working behavior and efficiency to achieve the set goals. Though the findings show working knowledge to be the least necessary, organizations should at least consider it because it can affect working behavior and efficiency. Knowledge might derive from learning in educational institutes. The employees need to learn more about working procedures and specific production processes when coming to work in any organization. Some organizations might provide training with regards to core production details, working processes, understanding of working instruments, remembering and understanding working standards and product quality standards. However, employees at all levels of the organization should learn and develop various skills and abilities to increase the potential of human capital within themselves, which will be conducive to working more efficiently and effectively. This will further promote the development and growth of the organization.

2. The next research suggestion is that, in order to cover every aspect of this research for the sake of organizational improvement at the individual and organizational levels, further research should be conducted on the connection between human capital and employee working performance and organizational performance, and it would be beneficial to study the factors of that connection between human capital and working performance, such as job satisfaction or perception for further improvement.

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