

## **Relationship between Human Capital and Performance Efficiency of Military Officers in Army Aircraft Maintenance Unit**

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### **Abstract**

This research aimed to study the relationship between human capital and performance efficiency of military officers in army aircraft maintenance unit. The sample consisted of 229 military officers in army aircraft maintenance battalion. The research instruments were the questionnaires. Statistical methods used for this study were frequency, percentage, mean, standard deviation, t-test, the one-way ANOVA and Pearson's product moment correlation coefficient. The overall human capital of military officers was at high level (mean = 4.11). The overall performance efficiency was at very high level (mean = 4.13). The correlation between human capital and performance efficiency of the military officers was positive at a high level, with the correlation coefficient of 0.912 at a statistical significance level of 0.05.

Keywords: Human Capital, Performance Efficiency, Military Officers, Army Aircraft Maintenance Unit

### **Introduction**

According to rapid change in global situation together with intensification of economic competition, human resources become the crucial factor driving the development in all areas (World Bank Group, 2020), The Twelfth National Economic and Social Development Plan of Thailand B.E. 2017 – 2021 (2016) and Thailand's 20-year National Strategy 2018 - 2037 (2018) have been set out to strengthen and develop sustainable human capital potential. The Royal Thai Army has prepared an annual civil service plan to prepare the army to be ready in coping with military threats and changes in various aspects. Therefore, an increase in the human capital is vital as it contributes the increased productivity and service efficiency. To this, the army needs to possess the knowledge, skills, attitudes and etc. in order that they will accomplish their mission and created value-added to the organization, under the constraints. This research studied the human capital and performance efficiency. The findings proposed as a guideline for developing human capital potential and organizational performance, allowing the Army's aviation mission to operate continuously, efficiently, and safely.

## **Objectives**

1. To measure the levels of human capital and performance efficiency of military officers in army aircraft maintenance unit.
2. To study relationship between human capital and performance efficiency of military officers in army aircraft maintenance unit.

## **Research Questions**

1. What are the levels of human capital of the military officers?
2. What are the levels of performance efficiency of the military officers?
3. Is there any relationship between the human capital and performance efficiency of the military officers and how is the relationship?

## **Literature Review and Theory**

This research included the concepts of human capital, performance efficiency related researches as: 1) Concepts of human capital (World Economic Forum, 2013) described the economic value of a worker's experience and skills. Human capital includes assets like education, training, intelligence, skills, health, etc. 2) Concepts of performance (Elyzid, 2016 and Peterson and Plowman, 1953) explains the performance measurement is comprised of into 4 essential factors, followings, Job Quality, Job Quantity, Time, and Cost. The literature review included 1) human capital needs for the Department of Defense Operational Contract Support Planning and Integration Workforce (Dunigan et al. 2017) 2) human capital management of Air Force SOF: Leadership identification, selection and cultivation (Andrews and Stitt. 2017) and 3) human capital management of Air Force SOF: Leadership identification, selection and cultivation (Bin Abdul and Rahman Ab Hamid. 2019).

## **Methodology**

The researcher developed the questionnaire as the instrument to collect the data 229 samples of the military. The questionnaire was developed from the conceptual framework. It consists of 3 parts as 1) demographics of the respondents or personal factors, 2) human capital of military officers in army aircraft maintenance unit 3) performance efficiency of military officers in army aircraft maintenance unit. The data analysis used in the questionnaires included descriptive statistics as frequency, percentage, mean, standard deviation, t-test, the one-way ANOVA, and Pearson's product moment correlation coefficient. The Likert's Scale was used to measure the level of human capital and performance efficiency of military officers in army aircraft maintenance unit. It indicated 5 ranges as 1 as lowest and 5 as highest. The interval in each range was 0.80. The questionnaire has been approved its content validity by IOC of more than 1.00 and the reliability by 30 tryouts was 0.98.

**Results**

The results showed 1) demographic profile 2) the human capital 3) the performance efficiency and 4) The relationship of the human capital and the performance efficiency.

Table 1 *Demographic profile*

Profile Factors	Particulars	F	%
Age	less than 25 – 25 years	38	16.59
	25 – 30 years	40	17.47
	30 – 35 years	39	17.03
	35 – 40 years	30	13.10
	45 – 50 years	35	15.28
	50 – 55 years	2	0.87
	55 – 60 years	39	17.03
Rank	Private First Class - Sergeant	70	30.57
	Sergeant Major Third Class - Sergeant Major First Class (Special)	124	54.15
	Sub Lieutenant - Captain	28	12.23
	Major – Colonel	7	3.06
	Experience	1 – 10 years	98
	10 – 20 years	53	23.14
	20 - 30 years	38	16.59
	30 years and above	40	17.47
	Education Level	High School/Vocational Certificate or equivalent	69
Diploma/High Vocational Certificate or equivalent		31	13.54
Bachelor		126	55.02
Master		3	1.31
Status		Single	80
	Married	116	50.66
	Widowed / Divorced / Separated	33	14.41
Average Monthly Income	less than 10,000 – 10,000 Baht	14	6.11
	10,001 – 20,000 Baht	71	31.00
	20,001 – 30,000 Baht	62	27.07
	30,001 – 40,000 Baht	51	22.27
	40,001 – 50,000 Baht	22	9.61
	50,001 Baht and above	9	3.93
Hazardous Duty Incentive Pays	Not Received Hazardous Duty	57	24.89
	Incentive Pays		
	Received Flying Duty, Crew Members Pays	153	66.81
	Received Flying Pay and Pilot in	13	5.68

	Command Pay		
	Received Instructor or Test Pilot Pay	6	2.62
Has Successfully	Yes	49	21.4
Completed the	No	180	78.6
Specialized Courses			

Table 2 *Level of Human Capital of Military officers in Army Aircraft Maintenance Unit.*

Human Capital	Mean	S.D.	Meaning
Knowledge	4.30	0.62	Very High
Skill	4.19	0.65	High
Attitude	4.44	0.49	Very High
Leadership	4.13	0.58	High
Communication	3.93	0.60	High
Numeracy	3.66	0.62	High
Intrapersonal skills	4.15	0.55	High
Interpersonal Skills	4.11	0.66	High
Tacit Knowledge	4.18	0.63	High
Digital Skill	4.05	0.81	High
Physical Attributes	4.10	0.74	High
Human Capital	4.11		High

Table 3 *Level of Performance Efficiency of Military officers in Army Aircraft Maintenance Unit.*

Performance Efficiency	Mean	S.D.	Meaning
Quality	4.06	0.72	High
Quantity	4.25	0.68	Very High
Time	4.11	0.80	High
Costs	4.12	0.73	High
Performance Efficiency	4.13		High

Table 4 *Pearson correlation coefficient test results for the relationship between human capital and different performance efficiency of military officers in army aircraft maintenance unit.*

Human Capital	Performance Efficiency			
	Pearson Correlation Coefficient	Significance Level	Relationship	Correlation Direction
Knowledge	.720**	.000	Strong	Positive
Skill	.731**	.000	Strong	Positive
Attitude	.744**	.000	Strong	Positive
Leadership	.901**	.000	Very Strong	Positive
Communication	.717**	.000	Strong	Positive
Numeracy	.462**	.000	Moderate	Positive
Intrapersonal Skills	.904**	.000	Very Strong	Positive
Interpersonal Skills	.918**	.000	Very Strong	Positive
Tacit Knowledge	.913**	.000	Very Strong	Positive
Digital Skill	.692**	.000	Moderate	Positive
Physical Attributes	.731**	.000	Strong	Positive
Human Capital	.912**	.000	Very Strong	Positive

\*\* Correlation is significant at the 0.05 level

### Conclusion

Based on the study, the overall human capital of military officers was at high level (mean=4.11). It can be sorted in descending order as follows: attitude, knowledge, skill, tacit knowledge, intrapersonal skills, leadership skills, interpersonal skills, physical attributes, digital skills, communication and numeracy. The highest level of human capital were at the very high level for attitude (mean= 4.44), and Knowledge (mean=4.30). The overall performance efficiency was at a high level (mean=4.13). It can be sorted in descending order as follows: quantity, costs, time and quality. The highest level of the performance efficiency was at a very high level for quantity (mean=4.25). The correlation between human capital and performance efficiency of military officers in army aircraft maintenance unit was positive at a high level (r=0.912). The results of hypothesis testing showed that 1) the difference of ages, ranks, work experience, level of education monthly income and hazardous duty incentive pays affected the human capital 2) The difference of age, ranks, status and hazardous duty incentive pays affected the performance efficiency at a statistical significance of 0.05.

## Discussion and Recommendation

Findings revealed that interpersonal skills has the strongest relationship with performance efficiency ( $r=0.918$ ), followed by tacit knowledge ( $r=0.913$ ), intrapersonal skills ( $r=0.904$ ), leadership ( $r=0.901$ ), Attitude ( $r=0.744$ ), Skill ( $r=0.731$ ), Physical Attributes ( $r=0.731$ ), Knowledge ( $r=0.720$ ), Communication ( $r=0.717$ ), Digital Skill ( $r=0.692$ ) and Numeracy ( $r=0.462$ ). This showed that when the human capital is at a high level, the performance efficiency of military officers working in army aircraft maintenance unit will be at a high level accordingly. The results of this study are similar with the related researches that human skills were very important. The recommendations was the army aircraft maintenance unit should increase more numeracy (mean = 3.66) and communication (mean = 3.93) of the human capital.

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## References

- Abdul Rahaman and Ab Hamid. 2019. Achieving Logistics Performance in Military Environmental Dynamism: The Role of Organizational Capabilities, *International Journal of Supply Chain Management*, 8(2), 1004-1017.
- Andrews, P. and Stitt, B. 2017. *Human capital management of Air Force SOF: leadership identification, selection and cultivation*. Monterey, California: Naval Postgraduate School.
- Dunigan, M., Schwille, M., Cherney, S. and Hastings, K., Nichiporuk, B. and Schirmer, B. 2017. *Human Capital Needs for the Department of Defense Operational Contract Support Planning and Integration Workforce*. California: RAND Corporation.
- Elyazid, S. 2016. Performance Measurement: Quality, Cost, and Time is New System: So Called Strategic Cost Management, *Research Journal of Finance and Accounting*, 7(17), 1-11.
- Government of Thailand. 2018. Announcement on National Strategy B.E. 2561 - 2580. 2018, *Royal Thai Government Gazette*, 135(82), 1-70.
- Office of the National Economic and Social Development Council. 2021.

- Competitiveness Indicator Manual of IMD and WEF*. Bangkok: Office of the National Economic and Social Development Council.
- Office of the Prime Minister (Thailand). 2016. *National Economic and Social Development Plan, 12<sup>nd</sup> Edition, B.E. 2560 - 2564*. Bangkok : Office of the National Economic and Social Development Council.
- Peterson, E. and Plowman, G.E. 1953. *Business Organization and Management*. (3<sup>rd</sup> ed.). Ill: Irwin.
- World Bank Group. 2020. *The Human Capital Index 2020 Update Human Capital in the Time of COVID-19*, Washington: International Bank for Reconstruction and Development.
- World Economic Forum. 2013. *The Human Capital Report*. Geneva: World Economic Forum.

## **Relationship between Passengers' Service Quality and Perception of Airline Communication towards Selection of New Normal Flight Service**

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### **Abstract**

This research aimed to 1) To study personal factors of passengers towards selection of new normal flight service 2) To measure passengers' service quality level in new normal flight service 3) To measure the levels of passengers' perception of airline communication in new normal flight service and 4) To study the relationship of passengers' service quality and perception of airline communication towards selection of new normal flight service. The researcher used the questionnaire instrument and distributed the 400 questionnaires to respondents. The statistical analysis was frequency, mean, standard deviation and Pearson's Correlation. The results of the study found that most of the respondents were business owners (=22.00%). The results of perceived service quality level from service quality dimensions were highest at assurance (mean = 4.31) and then reliability at high level (mean = 4.16). The overall perceived service quality was at high level (mean = 4.12). The relationship of passengers' service quality and perception of airline communication towards selection of new normal flight service was at a moderate level ( $r=0.454$ ).

Keywords: Service Quality, Airline, New Normal