Impact of workers' competence on their performance in the Malaysian private service sector

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Malaysia has to address the challenges of globalization to become a developed nation by year 2020. Changing economy to one that is based on knowledge-economy and enhanced importance of the service sector needs a competitive workforce with high performance and capability. This article analyses the impact of workers' competence towards their performance in the private service sector. The analysis is based on a sample of 1136 workers who are either executive, manager or professional from three service sub-sectors, namely, education, health and information and communication technology (ICT) in Selangor, Federal Territory of Kuala Lumpur, Penang and Johor collected in 2007/2008. In this analysis, Workers' Performance Index (WPI) and Workers' Competence Index (WCI) are developed and subsequently used to analyze factors determining workers' performance in the selected service sector. The results show that workers' competence has significant influence towards workers' performance. Besides that, human capital and workers' characteristics also determine workers' performance in the service sector.

Introduction

The vision of Malaysia to become a developed nation by 2020 needs a workforce that has high performance and capability to drive the nation's growth and development. Globalization of the world economy has all nations including Malaysia to be prepared to face a challenging economy. The driving sectors of an economy are exposed to this competitive atmosphere and the service sector gets attention due to its importance in helping to enhance numerous economic activities. Besides that, increase in competitiveness in this era is needed to ensure that Malaysia is at par with the developed countries.

Experiences from the developed countries show that the process of deindustrialization has enhanced the importance of the service sector in the economy (Rowthorn and Ramasamy, 1996). In Malaysia, the importance of each sector in the economy changes due to economic transition, and the service sector needs to be strengthened recognizing its relevance and importance to the process of growth and economic transition to k-economy. The service sector is the main contributor to the Malaysian economy. This sector contributed 58.2% towards the Gross Domestic Product (GDP) in 2006 (Ministry of Finance Malaysia, 2006).

The Malaysian labour market recorded a strong growth, with the whole economy providing numerous employment opportunities with a labour force growth of 2.4% in 2006. The service sector was the biggest job provider, contributing to 51.5% of total labour force, increasing to 3.8% in 2007 compared to only 3.3% in 2006 making the total labour force for this sub-sector to increase from 1154.7 million in 2006 to 1 198.2 million in 2007. The contribution towards GDP also increased to 10.5% in 2007 from 10.3% in 2006 (Ministry of Finance Malaysia, 2007). The service sector in Malaysia is becoming a more important contributor towards economic development and growth. Demand for output from the service sector increases due to development in the industrial sector

especially in the manufacturing sector. The service sector complements the other industrial sectors like the finance and transportation, playing a crucial role in the manufacturing sector's production process. Meanwhile, in the process of economic development and enhancing living standards, the social service sectors like education, health and ICT play an important role enabling Malaysia to be at par with other developing countries and achieving the developed nation status by 2020.

In the Third Industrial Master Plan (MP3) for the period of 2006 to 2020, the private service sector plays an important role in contributing towards the Malaysian economic growth. The main emphasis was on promoting the export of selected service sectors at a global level. Total investment in this sector was recorded at RM 54.9 billion in 2006 far exceeding the Third Industrial Master Plan's (IMP3's) target of RM 45.8 billion per year. Meanwhile, the domestic investment in the service sector was recorded at RM 48.6 billion and foreign investment in this sector was RM 6.3 billion.

The focus of this development is reflected in the Ninth Malaysia Plan (MP-9) whereby; efforts to develop and promote all the service sub-sectors are taken including education, health and ICT. The education sub-sector is enhanced through promotion of Malaysia as centre of excellence for tertiary education, whereas, health tourism is promoted as the regional hub and ICT is promoted to be utilized at all levels of the economy as it supports the development and growth of the economy and thus, enhancing the nation's quality of life. The service sector is expected to maintain growth at an average of 6.5% per year throughout the MP-9. In terms of labour force, the service sector employs 50% of present labour force, the largest compared to all the other industrial sectors that provide 1 062 800 job opportunities during the MP-9 (Malaysia, 2006).

In a world that is experiencing rapid globalization, competitive workers are needed. The competitiveness is reflected in the workers' capability and performance. Recognizing that competitiveness is a topic that receives much attention, this article analyzes the impact of competence towards work performance in the service industry. Analysis is based on 1136 workers at various levels like executives, managers and professionals of the private service sub-sectors of education, health and ICT in four states, namely, Selangor, Federal Territory of Kuala Lumpur, Penang and Johor Bahru whose data was collected in 2007/2008. Competence and performance of workers are measured by an index developed by the authors. Other determining factors influencing work performance are also analyzed in this paper.

This article is organized in five sections. The next section discusses the literature review related to issues of competence and performance of workers, and the empirical findings. The following section discusses the methodology and model specification utilized in enumerating the research findings. The final section summarizes the main findings and suggests several strategies that can help strengthening the competence and performance of workers in the service sector in Malaysia.

Literature review

Competence and performance concept

Results of a study conducted by Vroom (1964) found that work performance is a combination of individual ability and motivation, where ability is the individual capability to complete tasks and is a stable trait. Robbins (1978), on the other hand defines work performance as the capability of a worker to achieve an objective or goal of the organization. Sharifah Baharum et al. (2006) also studied the concept of performance where several definitions of other researchers like Porter and Lawler (1967) were taken, to define work performance as the success of an individual to achieve his role because of behaviour. Meanwhile, Arifin Zainal (1985) clarifies that performance is the level of achievement of an individual to complete an assignment. Study by Abdul Halim et al. (2001) concludes that work performance is the combination of mental and physical capability of an individual to complete a task, whereby, both of these aspects depend on the requirements of the job.

Vroom (1964) notes that ability is an individual' strength in completing a duty and it is rather stable. United Engineers Malaysia (UEM Group, 2007) defined individual ability based on several important criteria crucial in planning and organizing, communication, analysis and solving problems, customer orientation focus, staff development, leadership, achievement orientation, decision making and working as a team to achieve an organization's goals. Nevertheless, according to "The Secretary's Commission on Achieving Necessary Skills" (SCANS, 2000) there are five categories of competencies needed by a worker, as shown in Table 1.
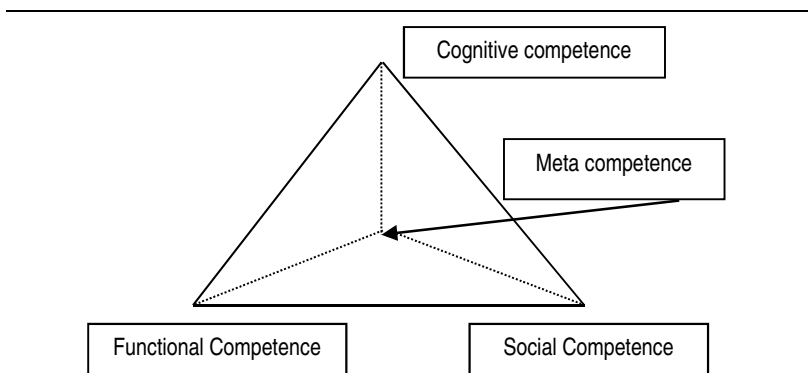
Francoise and Winterton (2005) explain that ability is competence that is an unclear concept that touches on knowledge and skills and various elements that are important. They view that the competence framework based on a dimension is not sufficient and suggest a multidimensional one. This framework involves four dimensions of competence, namely, cognitive, functional, social and meta. Figure 1 shows the theoretical framework of relationship between the four dimensions of competence. The first three dimensions are cognitive, functional and social and have universal values. In this framework, level of knowledge is explained by the cognitive competence, level of skill by functional competence, meanwhile, social competence explains the behaviour and attitude of individual workers. Meta competence is related to ability to acquire these competencies through the individual's own knowledge. The level of knowledge of an individual is said to help a worker to acquire the other competencies needed by the worker.

FIGURE 1. COMPETENCE DIMENSION FRAMEWORK
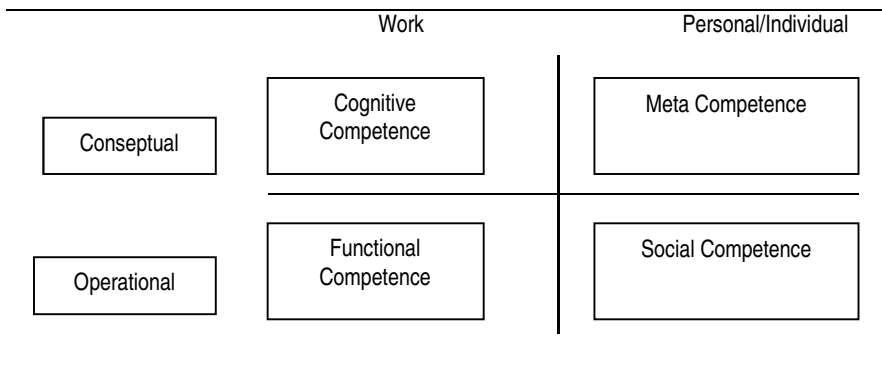
Source: Francoise and Winterson, 2005.

FIGURE 2. COMPREHENISVE COMPETENCE MODEL

Source: Francoise and Winterson, 2005.

TABLE 1. FIVE CATEGORIES OF COMPETENCIES

	Main Competency
Resource Management	Time allocation, money, material, space, personal
Inter Personal Skills	Team work, leadership development, customer satisfaction
Information Management	Organisation and management of files, communication and interpretation, computer operations
Comprehensive System	Understanding complex relations, understanding systems, creating and enhancing systems
Technology Power	Selection of technology, use of technology at work

Source: SCANS, 2000.

TABLE 2. WORK COMPETENCE

Component (*j*)	Indicator (*k*)	Total construct (*l*)
Cognitive (0.5)	a. Thinking Skills (level of knowledge)	5
	b. ICT Skills (information technology)	4
Functional (0.3)	a. Ability to make decisions and solve problems	5
	b. Work planning aspect	5
Social (0.2)	a. Communications and interpersonal skills	9
	c. Leadership Skills and teamwork	15

The comprehensive competence model according to Francoise and Winterton (2005) can be illustrated in a pyramid diagram as shown in Figure 2. This model explains that meta competence is at the peak of the pyramid, meanwhile, the cognitive, functional and soci1al competence are at the bottom as an important basis to develop the pyramid.

In fact, the work competence and performance are important measurements of competitive workers as explained by SCANS (1991 and 1994). Work competence is usually measured through workers' opinion towards relevant statements, whereas, work performance is measured through productivity, mobility and relevant statements as universally used. This aspect is influenced by factors like education, training and work environment (UNCTAD 2000). Competitiveness of workers is also closely related to level of technology usage. Sophisticated technology requires high level of education and training among workers that eventually help to categorize their level of competitiveness (Porter, 1998).

Empirical research

Several empirical evidence have been obtained to elucidate the fact that workers' performance and competence are directly related and lead to competitive workers in economic sectors. Besides that, other factors also have a positive relationship towards performance and work competence. This is shown by these literature reviews:

According to Ainon (2003) there are individuals who have high level of competence, but exhibit low performance because of not utilizing the competence. Therefore, the work performance is not at par with their competence. Higher performance may also be achieved through discipline and sheer hard work. Attention needs to be focused on competence, talent and performance but more detailed attention on efforts to develop talent and competence because in real life talent and competence are more useful than performance recorded.

Rahmah (2002) studied the competitiveness of human resources in the resource based industry among 174 firms in the manufacturing sector in Malaysia and found that there was a positive relationship between work performance and percentage of workers with tertiary education and it only occurs in the sub-sector of wood-based industry and chemical production. Meanwhile, the percentage of workers at the higher level had only a positive and significant relationship in the wood-based industry. The findings also pointed to the fact that all four types of training gave a positive impact on the workers'

productivity for the wood-based industry; meanwhile, the office management and computer training had a positive impact on output for the paper products industry.

Rahmah (2001) did a study on the small and medium scale industries. The study measured workers' competitiveness based on the level of productivity and related to competitiveness and company's performance output, value added, profit and export. Research findings also found that workers' competitiveness influences the company's performance. The study pointed out that the factor influencing competitiveness is education achievement and training, and the emphasis the firms put on these two driving elements. Meanwhile, McClelland (1973 and 1994) proved using the competency-based model that he can predict that the work performance is not biased towards race, gender or workers' economic background. His study showed that work performance is not a natural trait towards competence or level of knowledge and workers' skill.

Study by I-Chieh Hsu (2008) focused on the relationship between the organization's human capital referring work competence to organization's performance. Study refers towards 256 firms in Taiwan via questionnaires completed by the firm's manager. The study found that the organization's performance could be enhanced through sharing of knowledge. Meanwhile, knowledge sharing in an organization also has positive impact on the human capital. Human capital in an organization is defined in this study as the worker's competence that has an effective impact on the work performance. Other researchers also support this finding. Meanwhile, the knowledge sharing in an organization is said to have an effective impact on human capital development. This criterion involves the transfer of knowledge from one individual to another or to a different work group that eventually enhances work performance.

The competence aspect is often used as an indicator of the effectiveness of an education or training programme. (Norton 1987, Foyster 1990, Watson 1990, Delker 1990 and Sullivan 1995). Competence refers to and identified as "a specific skill needed in a specific situation" (Sullivan 1995). Meanwhile, Norton (1987) views that competency-based training as should be used in the learning process and time-based learning. This is because; according to Foyster (1990) using the time-based learning is not efficient. Therefore, according to Watson (1990) and Delker (1990) competency-based teaching has a huge potential in the training industry.

Ramli Mustapha et al. (2001) interviewed several bosses to identify the bosses' perception towards competency among graduates from polytechnics, technical schools and vocational schools. The study found that besides technical skills, self motivation, communication skills, social skills and interpersonal skills, ability to think critically and ability to solve problems, entrepreneur skills, and a positive and tangible attitude towards work are important and salient components needed at the work place in a knowledge-based economy.

Methodology and model specification

Measuring competence and worker performance

In this study, the work performance is divided into two components, namely, indicative and perception. Indicative component consists of wages and performance achievement marks of the workers per year. The perception component is generic skills and specific skills perception.

Worker's competence dimension is divided into six groups, namely, Communication and Interpersonal, Decision Making and Problem Solving, Information Communication Technology (ICT), Leadership and Teamwork, Work Management and Thinking Skills. A total of 40 competence and skills characteristics were outlined through statements to measure individual competence. ANOVA analysis and Likert scale 1 to 5 are used to evaluate each aspect of the individual worker's competence and performance to determine his achievement and compare between the service sub-sectors.

Dimension of worker's competence that is categorized into six groups is regrouped into three main components, namely, knowledge competence, functional competence and

social competence. Several indicators as shown in Table 2 explain each component. The total construct in the table refers to the total statements or variables in the questionnaire reflecting each component of the worker's competence. Search statement is evaluated on a 1 to 5 score Likert scale with 1 = Weak, 2 = Low, 3 = Good, 4 = Very Good, and 5 = Excellent.

TABLE 3. DIMENSIONS OF WORKER'S PERFORMANCE

Components (*j*)	Indicators (*k*)	Total Constructs (*l*)
Indicative Performance (0.6)	a. wages	-
	b. yearly performance evaluation marks of the workers	-
Perception Performance (0.4)	a. perception towards generic ability	5
	b. Perception towards specific skills	3

TABLE 4. INDEX VALUE SCALE

Scale Value	Competitiveness Level
< 0.2000	Very weak
0.2001 – 0.4000	Weak
0.4001 – 0.6000	Moderate
0.6001 – 0.8000	High
> 0.8000	Very High

As each component (*j*) has its own varying importance reflecting the worker's competence, therefore, differing values are given. For example, the cognitive component is felt to be more important as it involves the level of knowledge ascribed to each worker; therefore, a bigger value of 0.5 is given to this component. Nevertheless, the functional and social component given lower values based on their level of importance in determining the individual worker's competence, assigned values of 0.3 and 0.2 respectively.

Dimension of worker's performance is divided into two components; namely, indicative performance and perception of worker performance (Table 3). Indicative performance uses wages and yearly performance evaluation marks of the worker as a reflection of the worker's performance. Meanwhile, the perception of worker's performance uses worker's opinion to reflect generic and specific fields. Performance of generic fields refers to qualitative and quantitative work completed knowledge on duties, dependence and ability to make changes. On the other hand, specific field's performance covers performance related to interpersonal, communications and technical aspects.

Table 4 shows that bigger values are assigned to indicative performance component with the value of six because it is a better reflection of work performance. Perception performance component has only a value of 0.4 as it is only based on perception of the workers.

Development of the Competence Index
and the Worker's Performance Index

Competence index and the worker's performance index are developed based on the scores achieved. The general equation is used to obtain the score for each component as follows:

$$I_{ij} = \frac{1}{l_k} \sum_k \tilde{X}_{ik} \qquad (1)$$

With I_{ij} as the component index number-j for individual i that is obtained on average after being divided by the total constructs (l_k) in each indicator number-k. Meanwhile, $\tilde{X}_{ik}$ is the total normalizing score value for each i individual for each k indicator calculated using the following formula:

$$\tilde{X}_k = \frac{Actual\,valu\;ae_k - Minimum\,val\;ue_k}{Maximum\;\;Value_k - Minimum\;\;Value_k} \qquad (2)$$

The normalized score value is between 0 and 1 and this procedure can develop a general index as a measure to the dimension of work competence work performance. Each component has different degree of importance in reflecting the dimension of work competence and work performance; therefore, it has been assigned a different value reflecting its degree of importance. Hence, the index for dimension of work competence and work performance can be estimated using the following equation:

$$Z_{iy} = \sum_{j=1}^{m} wI_{ij} \qquad (3)$$

With I_{ij} as the component number- j index value obtained from the equation (1), meanwhile, m is the number of components j in the dimension number - y. Meanwhile w is the value given for each index based on the degree of importance of each component.

Index obtained using the equation sits between the value of 0 and 1. The value of index approaching 1 reflects a work competence and work performance that is high, and the index value nearing 0 reflects a weak work competence and work performance. The index value scale shown in Table 4 will be used to interpret both the indexes developed.

Factors determining work performance

To analyze the factors determining the work performance, a regression model is estimated. In this model competence, aspect is combined with other variables that can influence work performance like human capital achievement, worker's characteristics and sector involved. The regression model is as follows:

$$PI = \beta_0 + \beta_1 S + \beta_2 EXP + \beta_3 T + \beta_4 KP + \beta_5 WE + \beta_6 JS + \beta_7 SED + \beta_8 SEH + \mu \quad (4)$$

The definition of each variable is shown in Table 5.

TABLE 5. DEFINITION OF VARIABLES IN THE COMPETITIVE DETERMINANT MODEL

Dependent Variable	Definition
PI	Workers' Performance Index (WPI) obtained from equation (3)
Independent Variable	
(a) Human Capital	
S	Years of schooling based on highest level of education or years of schooling of the respondent
EXP	Work experience obtained from the total experience from previous employment
T	Training refers to attendance in trainings in the last five years, dummy variable, with 1 showing having attended any type of training and 0 as others
(b) Work Competence Index	
KP	Work competence obtained from the Work Competence Index (WCI) from equation (3)
(b) Characteristics of Worker	
JS	Minimum value for work satisfaction
WE	Minimum value for ethics, value and personality of worker
(c) Sub-Sectors	
SED	Education sub-sector, dummy variable; with 1 for education sub-sector and 0 for others
SEH	Health sub-sector, dummy variable; with 1 for health sub-sector and 0 for others

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Research findings

Workers' profile

A total of 1136 respondents were involved in the research, comprising executives, managers and professionals from the service sub-sectors of education, health and ICT. All these three sub-sectors are becoming more important in ensuring quality and competitive workforce. Questionnaires were distributed in Selangor, Federal Territory of Kuala Lumpur, Penang and Johor Bahru.

TABLE 6. RESPONDENTS ACCORDING TO SERVICE SUB-SECTORS AND STATE

State	Sub-Sector (%)			Total
	Education	Health	ICT	(%)
Selangor	305 (53.8)	84 (41.8)	188 (51.1)	577 (50.8)
Federal Territory of Kuala Lumpur	139 (24.5)	43 (21.4)	174 (47.3)	356 (31.3)
Johor	53 (9.3)	57 (28.4)	5 (1.4)	115 (10.1)
Penang	70 (12.3)	17 (8.5)	1 (0.3)	88 (7.7)
Total	567 (100.0)	201 (100.0)	368 (100.0)	1136 (100.0)

Source: Field Survey, 2007/2008

TABLE 7. RESPONDENTS' TYPE OF WORK ACCORDING TO SERVICE SUB-SECTORS

Type/Category of Work	Sub-sector (%)			Total
	Education	Health	ICT	
Senior Officers and Managers	150 (27.0)	64 (33.7)	145 (40.5)	359 (32.5)
Professionals	354 (63.8)	94 (49.5)	7 (2.0)	455 (41.3)
Technicians and Associate Professionals	31 (5.6)	10 (5.3)	148 (41.3)	189 (17.1)
Secretarial Workers	20 (3.6)	10 (5.3)	6 (1.7)	36 (3.3)
Service and Sales Workers	0 (0.0)	12 (6.3)	52 (14.5)	64 (5.8)
Total	555 (100.0)	190 (100.0)	358 (100.0)	1103 (100.0)

Note: Total Respondents 1136 (Not completed: 33).
Source: Field Survey, 2007/2008.

TABLE 8. HIGHEST EDUCATION LEVEL OF THE RESPONDENTS

Education Level	Sub sector (%)			Total
	Education	Health	ICT	
SPM/STPM	13 (2.3)	10 (5.0)	8 (2.17)	31 (2.7)
Diploma	49 (8.7)	112 (56.0)	74 (20.1)	235 (20.7)
Degree	267 (47.2)	59 (29.5)	247 (67.1)	573 (50.5)
Masters	218 (38.5)	14 (7.0)	38 (10.3)	270 (23.8)
Ph.D	16 (2.8)	0 (0.0)	0 (0.0)	16 (1.4)
Others	3 (0.5)	5 (2.5)	1 (0.3)	9 (0.8)
Total	566 (100.0)	200 (100.0)	368 (100.0)	1134 (100.0)

Note: Total Respondent 1136 (Not completed: 2).
Source: Field Survey, 2007/2008.

From the total returned questionnaires, Table 6 shows that education sub-sector has more response with a total of 567 (50.0%) compared to health sub-sector with 201 respondents or 17.7% and ICT sub-sector with the balance 368 respondents or 32.3%. Selangor recorded the highest number of respondents for all the sub-sectors comprising 577 respondents. The total respondents from the ICT sub-sector in Selangor and Kuala

Lumpur recorded the highest compared to Johor and Penang, with 188 respondents in Selangor and 174 respondents in Kuala Lumpur.

Majority of the respondents were Malays, comprising of 832 respondents or 73.5% followed by the Chinese with 166 respondents or 14.7% and the Indians 100 respondents or 8.8%. The research results show that the majority of the respondents (41.3%) are Professionals, followed by Senior Officers and Managers with 32.5%. A total of 17.1% were Technicians and Associate Professionals, mainly in the ICT sub-sectors (Table 7).

The highest level of education for most of the respondents are degree (573 respondents or 50.5%), followed by 270 respondents or 23.8 % having masters, whereas, 20.7% or 235 respondents have Diploma and the balance 0.8% have obtained certificates from various skills, technical and vocational institutions as shown in Table 8.

The majority of the respondents hold executive, management and professional jobs with a monthly gross income of RM 1 501 to RM 2 000 as shown in Table 9 comprising 27.6% of total respondents. There were also some respondents receiving gross monthly income of less than RM 1 000 a total of 36 respondents or 3.2% and 9 respondents or 0.8% of total respondents receiving more than RM 10 000 gross incomes per month.

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Ph.D	16 (2.8)	0 (0.0)	0 (0.0)	16 (1.4)
Others	3 (0.5)	5 (2.5)	1 (0.3)	9 (0.8)
Total	566 (100.0)	200 (100.0)	368 (100.0)	1134 (100.0)

Note: Total Respondent 1136 (Not completed: 2).
Source: Field Survey, 2007/2008.

TABLE 9. GROSS INCOME (RM) OF RESPONDENTS

Category of Monthly Gross Income (RM)	Frequency	Percentage
< 1 000	36	3.2
1 001 – 1 500	123	10.8
1 501 – 2 000	314	27.6
2 001 - 2 500	172	15.1
2 501 – 3 000	212	18.7
3 001 – 5 000	228	20.1
5 001 – 10 000	42	3.7
>10 000	9	0.8
Total	1136	100.0

Note: Total Respondent: 1136.
Source: Field Survey, 2007/2008.

TABLE 10. MEAN VALUE OF WORKER'S COMPETENCE INDEX (WCI)

Sub-Sectors	Aspects of Worker's Competence			WCI
	Cognitive Index (50%)	Functional Index (30%)	Social Index (20%)	
Education (n = 567)	0.3698	0.2114	0.1445	0.7257
Health (n = 201)	0.3465	0.2156	0.1480	0.7101
ICT (n = 368)	0.3691	0.2102	0.1416	0.7209
Total	0.3655	0.2117	0.1442	0.7214
n = 1 136				

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Competence and worker's performance index

Using the index development procedure explained earlier, two indexes were developed:
a. Worker's Competence Index (*WCI*);
b. Worker's Performance Index (*WPI*).

As a whole, this procedure can be shown in mean values as shown in Table 10. Based on the index values scale obtained earlier, the *WI* index is at the high level. In fact, all the three service sub-sectors are show similar trend. The results of the education sub-sector's mean value is the highest at 0.7257 compared to other sub-sectors. Nevertheless, the results do not vary much.

TABLE 11. MEAN VALUE OF WORKER'S PERFORMANCE INDEX (WPI)

| Sub-Sectors | Indicative Variable (60%) | | Perception Variable (40%) | | WPI |
	Wages	Perception Score	Generic Perception	Specific Perception	
Education (n = 567)	0.1237	0.6289	0.7305	0.7382	0.5195
Health (n = 201)	0.1124	0.6786	0.7512	0.7483	0.5372
ICT (n = 368)	0.1212	0.6527	0.7315	0.7317	0.5248
Total	0.1209	0.6454	0.7345	0.7379	0.5244
n = 1 136					

TABLE 12. RESPONDENTS ACCORDING TO THE WCI

| Index Scale | Service Sub-Sector | | | Total Index (%) (n = 1136) |
	Education (%) (n = 567)	Health (%) (n = 201)	ICT (%) (n = 368)	
Very weak	1 (0.2)	0 (0.0)	0 (0.0)	1 (0.1)
Weak	3 (0.5)	4 (2.0)	4 (1.1)	11 (1.0)
Moderate	96 (16.9)	47 (23.4)	62 (16.8)	205 (18.0)
High	315 (55.6)	92 (45.8)	205 (55.7)	612 (53.9)
00	152 (26.8)	58 (28.9)	97 (26.4)	307 (27.0)
Total	567 (100.0)	201 (100.0)	368 (100.0)	1136 (100.0)

Source: Field Survey 2007/2008

The results of the Worker's Performance Index (*WPI*) (Table 11) show that the *WPI* index is only at a moderate level, including the value for all the sub-sectors. Based on the mean values obtained for the service sub-sectors, workers in the health sub-sector have a better *WPI* score (mean value = 0.5372) compared to the workers in other sub-sectors., followed by ICT sub-sector with 0.5248 mean value.

The following descriptive analysis shows that most of the respondents in the private service sector in Malaysia record a high *WCI* score (Table 12). A total of 53.9% respondents have high work competence. Meanwhile, the private service sector has an overall moderate *WPI* as shown in Table 13, whereby, 64.3% respondents recorded a moderate score. This shows that *WCI's* score is better as compared to the *WPI's* score.

Factors determining work performance

The regression analysis (Table 14) shows that all the variables are significant except for health dummy variable. Human capital is a significant factor that determines *WPI*. An increase in one year of schooling will increase *WPI* by 0.005 and one year of experience will increase *WPI* by 0.004 in the service sector. Training also plays an important role in an impact on the worker's performance; workers who attended training have workers' performance index around 0.023 higher compared to those who did not attend any training. The characteristics of the workers also shows a relatively significant relationship (p <0.01) and influences *WPI*. Worker's Competence Index also recorded a significant (p <0.01) relationship, whereby the results show that an increase in the *WCI* will increase *WPI* by 0.323. Meanwhile workers in the education sub-sector have lower performance at 0.015 point compared to the ICT sub-sector.

TABLE 13. RESPONDENTS ACCORDING TO WPI

Index scale	Service Sub-Sector			Total Index (%) (n = 1136)
	Education (%) (n = 567)	Health (%) (n = 201)	ICT (%) (n = 368)	
Very weak	3 (0.5)	1 (0.5)	0 (0.0)	4 (0.4)
Weak	68 (12.0)	21 (10.4)	45 (12.2)	134 (11.8)
Moderate	367 (64.7)	121 (60.2)	243 (66.0)	731 (64.3)
High	126 (22.2)	57 (28.4)	80 (21.7)	263 (23.2)
Very High	3 (0.5)	1 (0.5)	0 (0.0)	4 (0.4)
Total	567 (100.0)	201 (100.0)	368 (100.0)	1136 (100.0)

Source: Field Survey 2007/2008

TABLE 14. ESTIMATION RESULTS OF WPI IN THE SERVICE SECTOR

Determinant Factor	B	t
Constant	-0.011	-0.337
(a) Human Capital		
Years of Schooling (*S*)	0.005	2.701**
Work Experience (*EXP*)	0.004	10.853***
Training (*T*)	0.023	4.249***
(b) Worker's Competence Index		
Worker's competence (*KP*)	0.323	14.256***
(c) Characteristics of Worker		
Job Satisfaction (*JS*)	0.029	6.428***
Ethics, Values and Personality (*WE*)	0.021	3.767***
(d) Sub-Sector		
Education (*SED*)	-0.018	-3.093**
Health (*SEH*)	0.003	0.409
R^2	0.447	
F	108.054	
Sample size (n)	1077	

Note: Independent variable: WPI (Total Respondents: 1136);   *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.
Source: Field Survey, 2007/2008.

Conclusion and policy implications

As a whole, a worker's performance level in the private service sector in Malaysia is at a moderate level while the worker's competence level is at a high level. Analyzing the factors that determine a worker's performance, it is evident that a worker's competence is the most influential and core factor, followed by other salient factors like human capital, consisting of years of schooling, job experience and training component. Besides these, the worker's characteristics, comprising of work satisfaction, ethics, values and personality also influence the worker's performance.

Therefore, efforts to enhance an efficient labour force must consist of a human capital package, whereby, there is a lifelong learning process. Continuous monitoring is done at the organization, whereby, the employer ensures that employees at various levels of employment have necessary competence and skill in accordance with the present needs of the firm so that the objectives of the firm can be met accordingly. To ensure that competence and skill, matching the job requirements and the current needs of the economy, continuous training need to be given to the workers as this has also proved to be the significant determinant of a worker's performance. Towards this end, more opportunities to attend various training programmes need to be given to workers, funded by the employer at the executive, managerial and professional levels. The government annual expenditure on training is higher as compared to other types of expenditure. These efforts are to encourage more workers to be interested in acquiring skills at the training sessions. Besides that, the workers should also have their own initiative and self-motivation to find opportunities to enhance their skill and competence.

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Apparently, employers need to provide a conducive and healthy working environment to enhance job satisfaction. In this context, a satisfying work environment and a good relationship between the worker and employer can help reduce the turnover cost and increase production. Good work ethics shown by the worker will eventually have a positive impact on the employee-employer relationship. Efforts to develop and enhance quality of each determinant factor need to be given greater attention by all the stakeholders, namely, the individual workers, employer and the government.

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