

## IDENTIFYING IMPORTANCE-PERFORMANCE MATRIX ANALYSIS (IPMA) OF INTELLECTUAL CAPITAL AND ISLAMIC WORK ETHICS IN MALAYSIAN SMES

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### ABSTRACT

The creation of intangible assets such as intellectual capital and Islamic ethics are crucial to cope with firm competitiveness issues. Five components of intellectual capital (human capital, organizational capital, relational capital, spiritual capital and technological capital) and Islamic work ethics were identified to model their impact on SME business performance in Malaysia. In doing so, survey questions from previous studies were adopted and customized to collect data. The sample of 445 SME entrepreneurs was utilized and the data were analyzed using SmartPLS 3.2.6. The results of the study revealed that human capital, organizational capital, technological capital and Islamic work ethics significantly influenced business performance. Then, this study explored the use of the Importance-Performance matrix analysis to identify priority factors that can be enhanced to increase business performance.

**Keywords:** Importance-Performance Matrix Analysis (IPMA); SME; intellectual capital; Islamic work ethics.

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### 1. INTRODUCTION

Intellectual capital, the catchword in the economic world, is crucial for sustainability [1] and



considered as the most important resources for competitive organizations in the knowledge-based economy [2]. Accordingly, instilling Islamic work ethics to Muslim SME entrepreneurs is crucial as to assist them gain competitive advantages in an open economic onslaught. A holistic system in Islamic economic business guidelines contains every part of life [3]. Intrinsically, in finding Islamic institutions (for business loan application) for instance, SME entrepreneurs should base it on the encouragement of faith to submit to Allah SWT, not merely following the recent trend to go for something Islamic [4]. Coupled with Islamic work ethics, intellectual capital investment allows firms to gain competitive advantage over their competitors, as it is difficult to imitate.

Intellectual capital is a strategic successful feature for all types of organizations [5], including small and medium enterprises (SMEs). However, compared to large firms, SME labour productivity is quite insignificant. SME's survival rate was about 58%, in which approximately 42% of the business establishments in year 2000 stopped operations by year 2005 [6]. These issues must be fixed to avoid SME entrepreneurs from being bankrupt [7].

Therefore, a research study needs to be conducted in an attempt to know to the associations between intellectual capital, Islamic work ethics and business performance among SME entrepreneurs in Malaysia. In order to postulate intellectual capital and Islamic work ethics within the comprehensive area of entrepreneurship studies, the first section begins by presenting the literature review and hypothesis formulation. In the second section, the paper endeavors to elucidate the methodology and results. This study will also explore the use of the Importance-Performance matrix analysis to identify priority factors that can be enhanced to increase usage. Finally, discussion, implications and limitations are discussed.

## **2. INTELLECTUAL CAPITAL, ISLAMIC WORK ETHICS AND BUSINESS PERFORMANCE**

Despite its multidimensionality, this study has defined intellectual capital as including human capital, organizational capital, relational capital, spiritual capital and technological capital.

Numerous scholars recognize the decisive role of human capital in increasing firm's business performance [8-10]. In [11] discovered that human capital is positively and significantly

related to business performance of the pharmaceutical sector of Jordan. Similarly, in [12] statistical result corroborated a positive relationship between human capital and organizational performance. Furthermore, many researchers support the direct influence of organizational capital on firm performance and enterprise value [13-15]. Likewise, the empirical results of [16] show that organizational capital is positively connected with the performance of the organizations in Malaysia. Besides that, firms need to create and maintain relational capital in order to be successful [17]. In essence, relational capital allows entrepreneurs to enhance their knowledge of opportunities, obtain access to critical resources and deal with business difficulties [18], therefore business profitability is achieved. Spiritual capital is also an important drive to SME business performance, in a way that it raises affirmative greater influence on corporate performance [19]. In [20] also found that spiritual capital and SME business performance have a strong relationship. Moreover, the application of technological capacities is positively correlated with business performance and can give organizations competitive advantage [21]. A study conducted on fabless firms in Taiwan found that IT and innovation have positive impact on the organizational performance [22]. Based on the literature review, the following propositions are made:

H1: Human capital has a positive relationship with SME business performance.

H2: Organizational capital has a positive relationship with SME business performance.

H3: Relational capital has a positive relationship with SME business performance.

H4: Spiritual capital has a positive relationship with SME business performance.

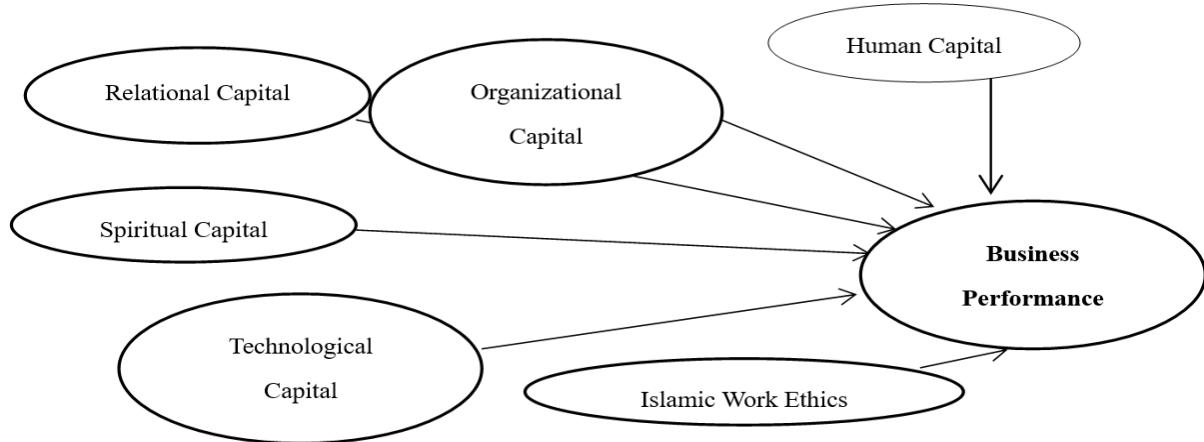
H5: Technological capital has a positive relationship with SME business performance.

From the Islamic work ethics perspective, the involvement in entrepreneurship is an obligation [23]. Muslim's desire for profit seeking in entrepreneurship and high business performance is well recognized by Islam [24]. Entrepreneurs can be good Muslims and at the same time rich people. Islamic work ethics denotes business activities undertaken by entrepreneurs, for the purpose of generating profits, in a determined atmosphere; later will result in higher performance and great success [25]. Islamic work ethics influences organizational performance in a positive way [26]. Therefore, to get clearer picture of the relationship between Islamic work ethics and business performance, the following hypothesis

has been developed:

H6: Islamic work ethics have a positive relationship with SME business performance.

Thus, the following hypotheses are posited in Fig. 1.



**Fig.1.** Conceptual model

### 3. METHODOLOGY

For human capital, organizational capital and relational capital, questionnaires earlier developed and tested by [27] were adapted. Spiritual capital and technological capital were measured using [28]. Items for Islamic work ethics were from [29]. Business performance was measured using the works of [30]. As suggested by [31], all constructs were measured using the same scale which is a 7-point Likert-type scale with anchors on 1 = strongly disagree and 7 = strongly agree. The questionnaire was validated through expert interviews and a panel of practitioners. The reliability of the instrument was further tested to find out whether it consistently measured the study variables on the scales used [32]. Cronbach alpha coefficients results of intellectual capital components and Islamic work ethics together with business performance exhibited that all measures have excellent reliability coefficients ranging from 0.864 to 0.876, which were above 0.75 respectively signify that the scales used were reliable. After going through preliminary evaluations, the data of 445 SMEs in Kelantan are ready for further analysis.

To analyze the research model, the Partial Least Squares–Structural Equation Modeling (PLS-SEM) analysis using SmartPLS 3.2.6 [33]. PLS-SEM model contains two inter-related models; a measurement model and structural model, which are assessed separately in a

two-phase process [34]. To test the significance of the path coefficients and the loadings, a bootstrapping method (1000 resamples) was employed [35]. In the last step, the analysis of importance-performance matrix of path modelling was performed. By assessing IPMA, the impact of exogenous latent variables (human capital, organizational capital, relational capital, spiritual capital, technological capital and Islamic work ethics) with a relatively high importance and relatively low performance on an endogenous latent variable (i.e. business performance) would be identified [36]. Consequently, IPMA results deliver managerial acumen to address and improve the recognized areas with high importance and low performance [37].

## 4. RESULTS AND DISCUSSION

### 4.1. Measurement Model

Convergent validity is the extent to which several items assessing the same concept are in agreement [38]. The convergence validity of the measurement is usually determined by observing the loadings, average variance extracted and composite reliability [35]. For this study, the AVE value was higher than 0.50 or indicating an adequate degree of convergent validity, meaning to say that the construct explains more than half (50%) of its indicators' variance. Furthermore, all constructs exhibited composite reliability which is well above the threshold value of 0.7 [34]. Then, researcher utilizes Heterotrait-Monotrait Ratio (HTMT) technique developed by proposed by [39] to determine the discriminant validity of measurement. The result of HTMT inference also shows that the confidence interval does not demonstrate a value of 1 on any of the constructs, which also confirms discriminant validity.

### 4.2. Structural Model

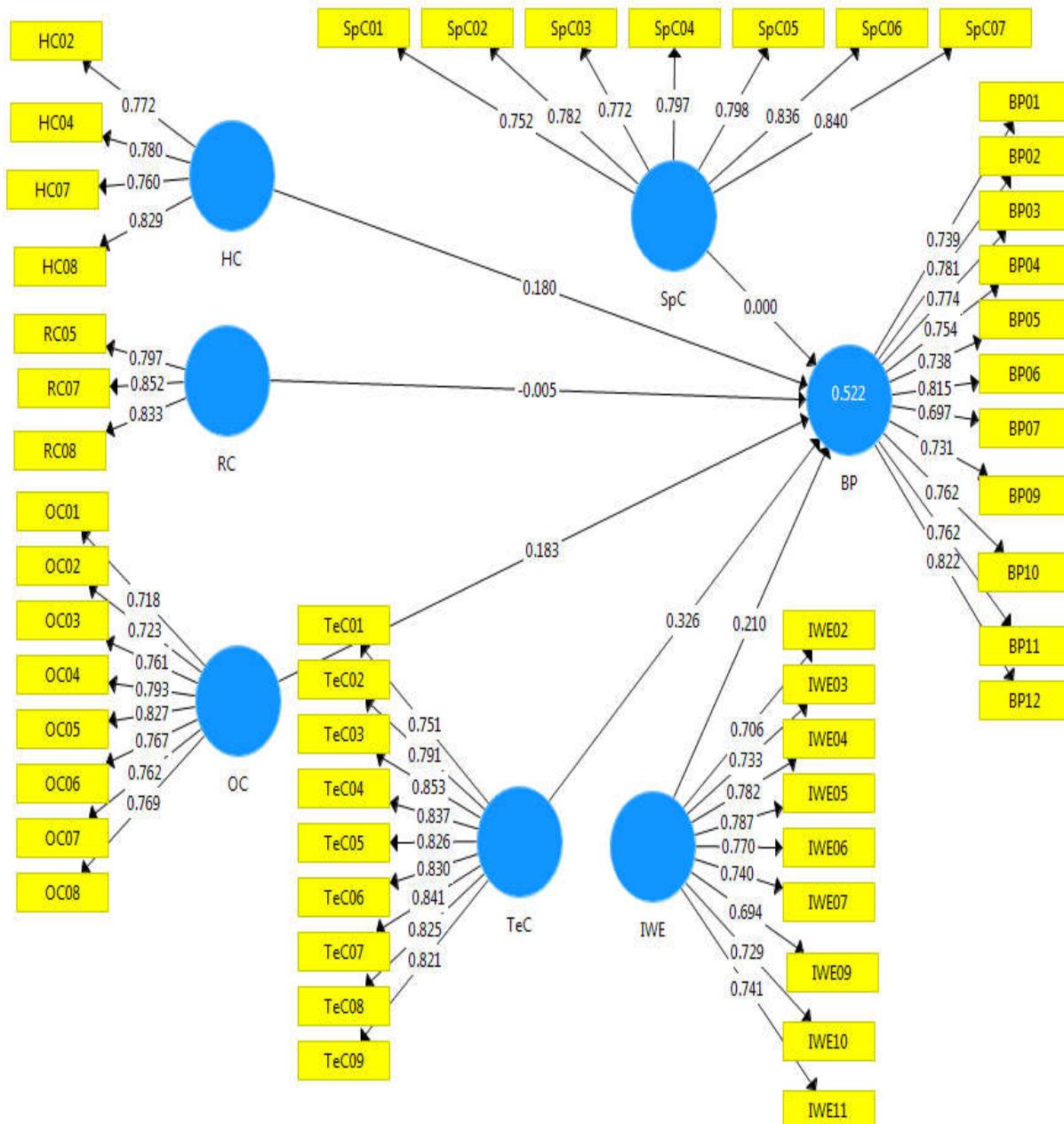
Structural model shows the causal relationships among constructs in the model (path coefficients and the  $R^2$  value). Together, the  $R^2$  and the path coefficients (beta and significance) indicate how well the data support and hypothesized model [39]. The  $R^2$  for business performance exhibits that human capital, organizational capital, technological capital and Islamic work ethics explained 52.2% of the variance in business performance. Table 1 and Fig. 2 show the results of the structural model from the PLS output. Human capital,

organizational capital, technological capital and Islamic work ethics seem to have impacts on business performance. In contrast, relational capital and spiritual capital do not influence business performance.

**Table 1.** Path coefficients and confidence interval

Exogenous Constructs	Endogenous Construct	Path ( $\beta$ )	Std. Error	t-Values	Confidence Interval		Decision
					Lower Level	Upper Level	
					(LL)	(UL)	
Human Capital -> Business Performance		0.18	0.053	3.392**	0.087	0.303	Supported
Organizational Capital -> Business Performance		0.183	0.065	2.828**	0.065	0.316	Supported
Relational Capital -> Business Performance		-0.005	0.053	0.102	-0.106	0.097	Not Supported
Spiritual Capital -> Business Performance		0	0.055	0.001	-0.115	0.104	Not Supported
Technological Capital -> Business Performance		0.326	0.05	6.532**	0.229	0.423	Supported
Islamic Work Ethics -> Business Performance		0.21	0.048	4.344**	0.106	0.304	Supported

Note: \*\* p < 0.01, \* p < 0.05.

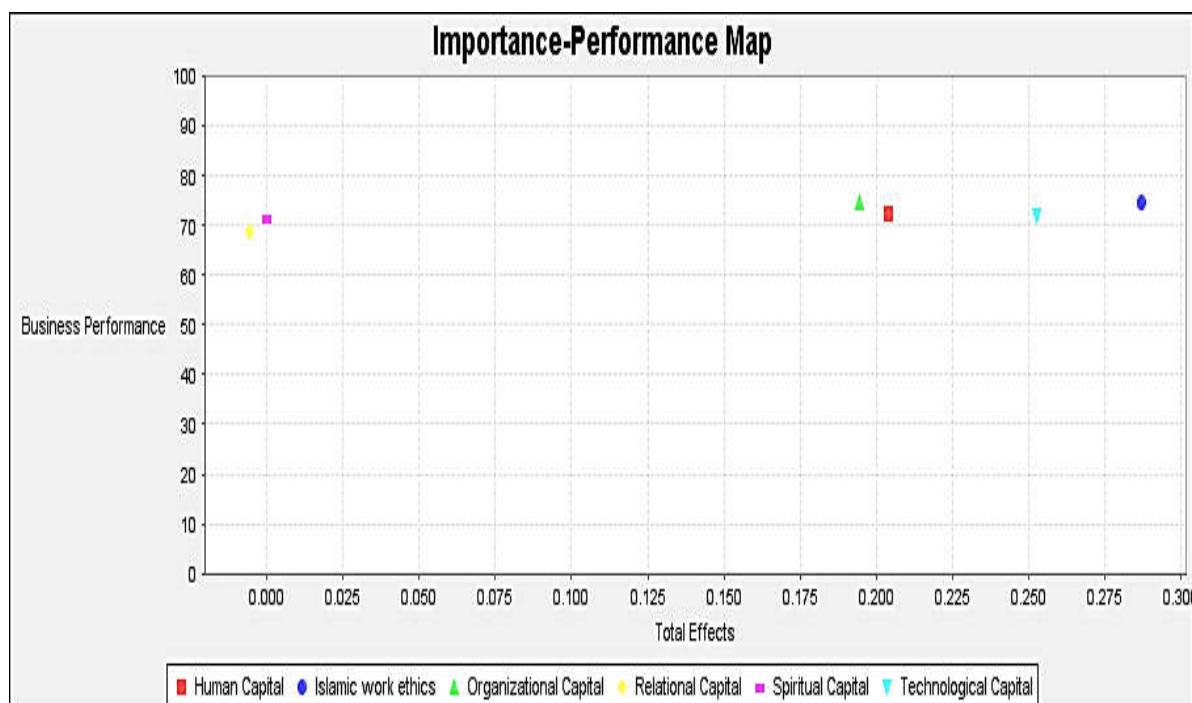


**Fig.2.** Structural model from the PLS output

Furthermore, this study found that human capital, organizational capital, technological capital and Islamic work ethics influenced business performance significantly. The finding is supported by [40, 42]. Similar to the results of [41, 28], the finding of this study implies that relational capital and spiritual capital are not important predictors of the company's successful performance. Relational capital incorporates the character and qualities of the relationship or network between individuals, which is frequently categorized through trust and commitment [43]. A likely explanation for this is that SME entrepreneurs failed to gain trust and commitment from shareholders, customers, suppliers and community.

### 4.3. Importance-Performance Matrix Analysis (IPMA)

Fig. 3 and Table 2 show the IPMA of SME business performance. The IPMA analysis highlighted three most important variables namely Islamic work ethics, human capital and technological capital. Relational capital and spiritual capital are not significantly influencing business performance. Even though organizational capital has high performance, it is not an important variable in the prediction of business performance. Hence, entrepreneurs should not focus much on this capital. Nevertheless, Islamic work ethics reveals the most important and possess the highest performance among the three constructs. SME entrepreneurs should therefore integrate Islamic work ethics into human resource system of their organization.



**Fig.3.** The importance-performance map

**Table 2.** Importance and performance matrix (IPMA) result

Construct	Importance (Total Effect)	Performance (Index Values)
Human Capital	0.204	72.28
Islamic work ethics	0.287	74.573
Organizational Capital	0.194	74.572
Relational Capital	-0.006	68.832
Spiritual Capital	0	71.193
Technological Capital	0.253	71.76

## 5. IMPLICATIONS AND LIMITATIONS

For the theoretical implications, not many researchers have previously explored intellectual capital and Islamic work ethics of Malaysian SMEs. So, this study emphasized on the components of intellectual capital and details of Islamic work ethics and expounded their contents which resulted in further improvements. Therefore, it would inspire prevailing consideration of taking a broad view intellectual capital and Islamic work ethics into industries of SMEs. Looking at the practical implications, SME entrepreneurs can utilize the intellectual capital and Islamic work ethics to increase business competitiveness and react to market demand. But, more emphasis should be given to Islamic work ethics since it appears as the most important and highest performance. Finally, policy makers will be able to comprehend the issues of intellectual capital and Islamic work ethics better and offer support for SMEs in their effort to stimulate those internal resources.

The results of this study should be considered in light of the two limitations. First, the sample size of 445 covered respondents from one region in Malaysia (Kelantan) while the other 12 regions were not included due to geographical distance. Second, since the study was conducted in snapshot, additional research efforts are needed to evaluate the validity of the investigated models and our findings across time.

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