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The Influence of Intellectual Capital and Business Strategy Toward Innovation Capability and Firms Performance the Case of Small Management Enterprise Jombang Regency East Java Indonesia

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Abstract: The study of small firms in Indonesia become more strategic issue because of job creation and generating income for more then 65% of are small entrepreneurs that encouraging employment in many type of small industries including handicraft. However, unfortunately, some conditions of small industries are less competitive to have expanding their products. This research is to conduct and investigates the cability of Innovation and creativity as the main component as mediation of business strategy and the quality of intellectual capital to drive business performance of small size industries in Jombang Regency East Java Indonesia. This research have found that innovation capability is the most important latent variables that successfully mediated business strategy and intellectual capital to have strongly impact to business performance of small size industries in Jombang Regency East Java Indonesia.

Key words: Small firms, business strategy, intellectual capital and innovation, unfortunately, Jombang Regency, Indonesia

INTRODUCTION

The Small Management enterprises (SMS) become more determinant factor in providing jobs and income taxes for the government revenue. Based on the results of the survey in 2010 of HSBC that the SME sector in Indonesia has grown about 25% and from 51 million SME businesses listed, 37% of them will be doing business expansion, 16% will increase the number of its employees. This shows that SMES have considerable multiplier effects in the national economy. Roughly 60% of GDP is currently related to the SME sectors.

Man *et al.* (2002) argue that the success of Small and Medium businesses (SMEs) is affected by the main factor, i.e. knowledge, experience and skills of the owners and workers. The entrepreneurs who are able to follow up on business opportunities will be a strategic position to develop innovation and their new product. Barney and Clark, states that one of the approaches used to have a competitive advantage is a resource-based approach (Resource Based Theory). Resource Based Theory (RBT) is thought to have developed in the theory of strategic management and competitive advantage of companies that believe that the company will achieve excellence in having superior resources.

The ability of competing SMES not only lies in the ownership of tangible assets but more on Innovation, information systems, management of organizations and resources. Therefore, the company increasingly focuses on the importance of knowledge assets (assets of knowledge) as well as SMES in Jombang Regency who have used the ability and knowledge to improve performance and development but the results have not been fullest.

This theory assumes that the company as a collection of resources and capabilities, this view is based on the assumption that the difference in resources and capabilities of the company's competitors will give you a competitive advantage. The existence of heterogeneous resources that give a unique character for each company. There are several criteria of the company in order to achieve a competitive advantage, namely: resources should add value to the positive for the company, resources must be unique or rare among existing competitors, resources should be hard to emulate and resource cannot be replaced by any other competition resources (Barney and Clark, 2007).

While the theory that gives strong support on the recognition of intellectual capital as one of the company's assets are Knowledge Based Theory (KBT) this theory which gives the view based on human resources which places emphasis on the importance of the knowledge of the company. And this completes the Resource Based Theory (RBT) which has yet to give confessional will be adequate knowledge. In view of the knowledge-based, companies must continually develop new knowledge as one of the company's competitive advantage.

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The capacity and effectiveness of the company in generating and delivering information and knowledge will be able to determine the value and superiority of the company in the long term (Bontis *et al*., 2000). According to Stewart (1997), intellectual capital is seen as knowledge and experience are used to create wealth. Bontis *et al*. (2000) identify intellectual capital as a set of intangible resources (abilities and competencies) that drives the Organization to create the performance and value of the company.

A study of intellectual capital has been much done like: Bontis (2000) in Malaysia. This research resulted in the conclusion that Human Capital (HC) associated with Structural Capital (SC) and Customer Capital (CC); related to Structural Capital (SC) ROA Net Income Total Assets LDR Total Loans Total Deposit. Customer Capital (CC) and Structural Capital (SC) associated with the performance of the industry. Research conducted by Bontis*et al*. (2000) performed on the large companies listed on the stock exchange of Malaysia. The research found that there is a relationship between elements of the SC in the IC with the performance of the industry but there is no relationship between the elements of the CC and HC with the performance of the industry.

Research conducted by the Firer and Williams (2003) in South Africa. This research method using measurement methods VAIC™ which analyzed with linear regression. This research resulted in the conclusion of VAIC™ related to company performance (ROA, ATO, MB).

Research conducted by Chen *et al*. (2005) in Taiwan. This research method using measurement methods VAIC ™ which analyzed with correlation, regression. This research resulted in the conclusion of the IC influence on market value and performance of the company; effect on the company's performance RD. While the research conducted by Tan *et al*. (2007) in Singapore. This research method using measurement methods VAIC TM. This research resulted in the conclusion of a positive effect on performance IC companies, either the present or the future. The average growth of IC related positively with the company's performance in the future; the contribution of the company's performance against different IC based on the type of industry.

Barney and Hesterly (2008) conducted a study of the influence of Intellectual Capital (IC) against the performance of a company. Research conducted by Benny tried to test the Intellectual Capital (IC) against the company's performance in various types of industries. Population research is all companies listed Indonesia stock exchange, there are 73 companies that comply with the criteria of purposive sampling, so as to be included in the data analysis. Companies that can be analyzed consists of 44 manufacturing companies, 11 property companies, service companies, 126 trading company.

The data used as many as 219 company financial statements registered in BEI in 2003-2005. The results of his research found that there is no positive influence amongst the IC a company with its performance, the higher the value of IC a company, the company's future performance are not getting high, no positive influence between IC growth rate a company with a performance time of William and Jasper research on the influence factors of human capital and technology capital, in measuring Intellectual capital and its relationship to improve the company's performance. Such research produces conclusions that: Human Capital (HC) Structural Capital (SC) Social Capital (CE) and Technological Capital (TC) has a positive effect in improving the performance of the company. Human Capital (HC) as a media liaison between Structural Capital (SC) Social Capital (CE) and Technological Capital (TC) has huibungan positively to the performance of the company. This study used a measure developed by Pulic which models VAIC.

The average of the above research in intellectual capital measurement using a VAICTM of Pulic these measurements are monetary/financial and non financial aspects does not reflect qualitative or so not able to uncover information that actually sejauhmana intellectual capital of enterprise human resources contribute to the company's performance. Financial performance also use size/diproksikan with financial aspects only ROA and ROE while the non financial aspects is not used as a measurement of performance, so that the performance of the company is not komprehenship. Based on some earlier research results regarding the relationship between the intellectual capital with the company's performance, there is still a difference in the results, so that the rift as the research gap.

Research on the ability of the innovation that can appear as a mediating relations between intellectual capital with the company's performance was also a rarity, so relations intellectual capital that mediated the ability of innovation with the company's performance be next for this research gap.

Although, there are many studies about continuous improvement in SMEs (Gunasekaran *et al*., 1996), there is a lack of in-depth studies of the relative implementation of Innovation in SMEs. Intellectual capital that provides the structure, systems, strategy and culture is the antecedent of innovation. Some research using variables such as mediation, innovation research by Akgun *et al*. (2010) and Wu (2012).

Sivalogathasan but some are using Innovation as a moderation of such research by Wu (2012), so that this becomes a crack in this research to build the intellectual capital concept that can encourage the growth of Innovation capabilities for the company.

The capability of innovation is one of the determining aspects against the company's performance, especially in an environment of increasingly tight competition this time. Companies that are able to innovate will enable it to remain in the competition and gain meaning. Innovation is driving the growth of the company, directing the success in the future and the driving force of the company to keep afloat in the global economy. This suggests that Innovation is crucial for every company in the world.

According to Gray *et al*. (2002) that the ability of Innovation competing companies will ensure the ability of competing companies therefore innovation is an important concept for researched because innovation is also giving a great impact for the success of the company. The relationship between innovation performance with the company, according to Lee and Tsai (2005) as well as Lin and Chen (2007) is the higher the company's Innovation ability of the higher performance of the company. As for the opinion by Lin and Chen (2007) also shows the existence of empirical gap over the relationship of innovation and performance.

This empirical gaps occur due to variations in the findings over the relationship of innovation and performance. This is because not all innovations can improve the performance, although the normative basis that Innovation will improve performance.

Research in Indonesia related to Intellectual Capital/own IC has not so much, especially research that specifically use the important elements of Intellectual Capital for SMEs by Montequin *et al*. (2006). While this research focuses on intellectual capital or internal resources in SMEs, intellectual capital is also known as a knowledge organization that needs to be regulated to ensure that knowledge is valuable. Globalization has driven innovation became a requirement for SMEs to operate in a more competitive global market (Gunasekaran *et al*., 1996).

Theoritical review: Jausch and Glueck defines strategy as "unified plan, comprehensive and integrated the company with excellence associate environmental challenges and are designed to ensure that the main goal of the company can be reached through the implementation of the right". while the definition of strategy is a pattern of resource allocation that lets organizations can maintain its performance (Barney and Wright, 1998).

The strategy can also be defined as the overall plan regarding the use of resources-resources for creating a favourable position so that the right company-could actually achieve the goals it wants (Grant, 1996).

According to Porter (1985a, b), there are two basic types of competitive advantage that can be owned by a company that is low cost and finding. On that basis, there are three generic strategies to achieve better results than the average in an industry. The third generic strategy that consists of: cost leadership, finding and focus. Coupled with the two variations of the strategy focus, namely: cost of finding a focus and focus. Strategy of differentiation or finding, the company strives to be a different company or is considered different from its competitors. The difference could be in the product or service being sold, in the delivery system is how the product or service for sale in the manner of the game or on other factors. The important difference is applied must have the value of the positive or valuable for consumers (Porter, 1985a, b). Therefore in one industry can there be some strategy differensiasi if there is more than one different attributes and.

Competitive advantages strategy: According to the Porter (1985a, b), there are two basic types of competitive advantage that can be owned by a company that is low cost and finding. On that basis, there are three generic strategies to achieve better results than the average in an industry. The third generic strategy that consists of: cost leadership, finding and focus. Coupled with the two variations of the strategy focus, namely: cost of finding a focus and focus.

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Partnership strategy: Wheelenand Hunger (2012) defines that partnership strategies can be used to increase the competitive advantage in an industry through cooperation with other companies. Wheelenand Hunger (2012) divide the partnership strategy into collusion and alliance strategy. White collusion, strategy is a active cooperation from one firm into another firm targeting industrial strategy to reduce output and raise prices and matching the economic law of supply and demand. On the other side, alliance strategy is a partnership of two or more corporations or business units to achieve the

objectives of the strategy which most significant and mutually beneficial. Partnership is also important for rising competitive advantages (Barney, 1991; Walker, 2009) argue that partnership is the motivation of a firm cooperation include technology transfer, market access, cost reduction, risk reduction and alteration of industrial structure. Ma (2004) by adopting some theoretical reviews clocludes that the partnership can be defines as an initiation and participation in the setting of management collaboration strategy.

Innovation capability: Innovation capability concept has a long history of discussion that the process of Innovation and understanding vary, primarily based on the competition between the companies and the different strategies that can be utilized to compete. Schumpeter is often regarded as the first economist that gives attention to the importance of an innovation. In 1949, Schumpeter mentioned that innovations consists of five elements: introduce a new product or qualitative changes in existing products, introduced the new process to the industry, open a new market, developing new sources of supply of raw materials or other input and changes in industrial organization.

In the past mor then 50 years, the concept of the innovation continue to be developed by a number of experts and institutions. This mean is resource based theory (Barney, 1991). In the perspective of Resource-Based View (RBV) internal environment or internal resources is the primary input and determining strategies to achieve high performance (Hitt *et al*., 2011). This is in line with the strategic management approach that makes both of the environment and external enviroenmentas input in the formulation of strategies.

Resource Based Theory (RBT) is thought to have developed in the theory of strategic management and competitive advantage of companies that believe that the company will achieve excellence in having superior resources (Barney, 1991). According to the resource based view, the RBT will Excel in business competition and getting a good financial performance when it has as exploit those assets.

Intellectual capital: Intellectual capital refers to capital forms of non physical or intangible capital associated with human knowledge and experience as well as the technology used. Intellectual capital is often defined as a resource of knowledge in the form of employees, customers, processes or technologies that could be used in the process of creating value for the company (Bukh *et al*., 2005).

The firm's performance: Performance is defines as the ability of work performance demonstrated by the successful combination of manpower and strategy to expand market shared. Hawkins (The Oxford Paperback Dictionary in 2009) notes and defines the notion of performance as the process or manner of performing, a notable action or achievement, the performing of a play or other entertainment'. The firm's performance should constitute results that can be measured and described the empirical conditions a company of any size that are agreed upon. To know the performance is achieved then conducted the performance assessment. The word assessment is often translated with the word assessment. While the company's performance is something produced by a company within a certain period with reference to the standard set.

MATERIALS AND METHODS

We applied quantitative approach in our work to answer our research goals. Variance-based structural equation modeling as well as factor analysis were used to analyzed the data and make research inferences. The data were collected from community leaders at eight districts in Buleleng regency. Community leaders were appointed as the respondents in our work because they are the representation of people at their villages.

Population and sample: Jombang regency is is located at East Java Indonesia covers the area as much as 545.66 km^2 is about <4.50% of East Java's area. East Java is devided into 28 regions. Jombang regency with total population recorded on 2016 is <3 billion people with 67% of total entrepreneur were small industrial firms (BPS, Jatim). The population in our research are traditional managers opf small firms operate in many kinds of industries such as textile, silver handicraft and others. According to data report by BPS more then 65% of small firms industries in Jombang regency have succeeded to partnership with international market networks. The total small firms operates in Jombang regency is 1800 units, therefore bases on 5% Slovin and with proportional random sampling we than found 260 sample sized as representation of total population of the small firms in Jombang Regency.

Reserach instrument: A five-option Likert's scale questionnaire is developed to collect data. Prior to its distribution, validity and reliability of questionnaire was examined in a pilot study conducted at Jombang regency and selected randomly 30 respondents as the research instrument experiment for understanding the quality of research instrument to be used in conducting the research agenda of 260 units data survey.

Table 1: Hierarchies Second Order Dimension Model

Primary construct	Sub-construct	Dimension
Business strategy (X1)	Competitive strategy (X1.1)	X1.11: Product design effectively
Porter (1990)		X1.12: Product market strategy
Hitt *et al.* (2011)		X1.13: Unique creation of product design
		X1.14: Competitive product
		X1.15: Better service quality
		X1.16: Low price strategy
	Partnership strategy (X1.2)	X1.21: Sharing information
		X1.22: Competitor attacks against
		X1.23: Reducing risk strategy
		X1.24: Reducing product competition
Intelectual capital (X2)	Human capital (X2.1)	X2.11: People's competence
Montequin *et al.* (2006)		X2.12: Competence improvement
		X2.13: Staff stability
		X2.14: Improvement capacity of groups
		X2.15: Information technology
	Structural capital (X2.2)	X2.21: Product technology
		X2.22: Process and business philosophy
		X2.23: Organization structure
		X2.24: Intellectual property
		X2.25: Customer base
	Relationship capital (X2.3)	X2.31: Customer loyalty
		X2.32: Market proximity
		X2.33: Sales effectiveness
		X2.34: Suppliers relationship
		X2.35: Interrelations with customers
Innovation capabilities (Y1)	Internal factor (Y1.1)	Y1.11: Education
		Y1.12: Owner experience
		Y1.13: Technical knowhow of employee
		Y1.14: Manpower investment
Romijn (1998)	External factor (Y1.2)	Y1.21: Communication with employee
		Y1.22: Communication with suppliers
		Y1.23: Communication with competitors
		Y1.24: Commnunication with provider
		Y1.25: Communication with associations
Firms performance (Y2)	Financial perspective (Y2.1)	Y2.11: Sales targeting
Kaplan and Norton (1996)		Y2.12: Break even ratio of investment
		Y2.13: Profit growth percentages
	Customer service perspective (Y2.2)	Y2.21: Market shares target
		Y2.22: Customer retain
		Y2.23: Attract new customers
		Y2.24: Customer service
	Internal business process (Y2.3)	Y2.31: New product innovation
		Y2.32: Operastional efficiency
		Y2.33: After sales service
	Learning and growth (Y2.4)	Y2.41: Employee productivity
		Y2.41: Information system quality
		Y2.43: Work condition support

Data analysis: Basically, a structural model can be analyzed by applying the covariance-based or variance-based Structural Equation Modeling (SEM). Both techniques have their own limitations (Henseler *et al.*, 2015; Hair *et al.*, 2012). In our research, we applied variance-based SEM noting we included a formative construct in our model that cannot be analyzed by using covariance-based SEM.

Research model and hypothesis: This research is developed using theoretical building model and that would be plan to test empirical testing procedure by SEM PLS second order hierarchies model as developed by Lin *et al.* (2005), Wetzel *et al.* (2009) and Beckers *et al.* (2012). Hierarchies second order model will be used to seek as theoretical testimony, more improvement of statistical test power willbe available (Wetzel *et al.* 2009; Beckers *et al.*, 2012). Based on second order methodology, however, the dimension relation would be connected as primary construct, sub-construct and indicators as presented in Fig. 1.

Based on Table 1, the interdependent relation between constructs are designed in two type dimension characters. First is the reflective-reflective second order model can be classified in the construct of business strategy (X1) Innovation capability (Y1) and firms performance (Y2) (Fig. 1). Second is formative-formative second order model that can be classified as the primary construct to sub construct relation of intellectual capital (X2) that design for formative-formative type model.

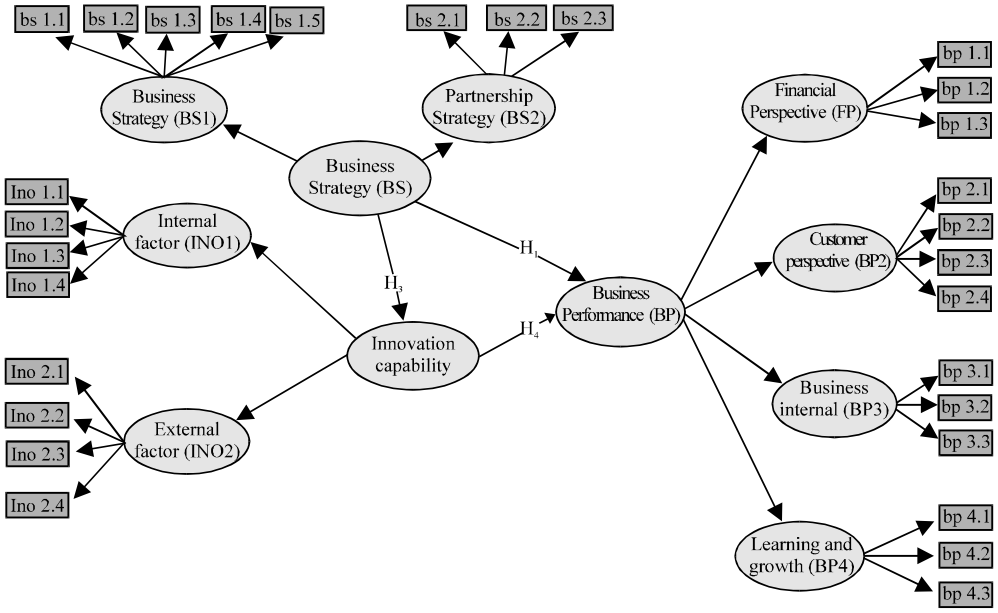

Fig. 1: Hierarch reflective-reflective type model

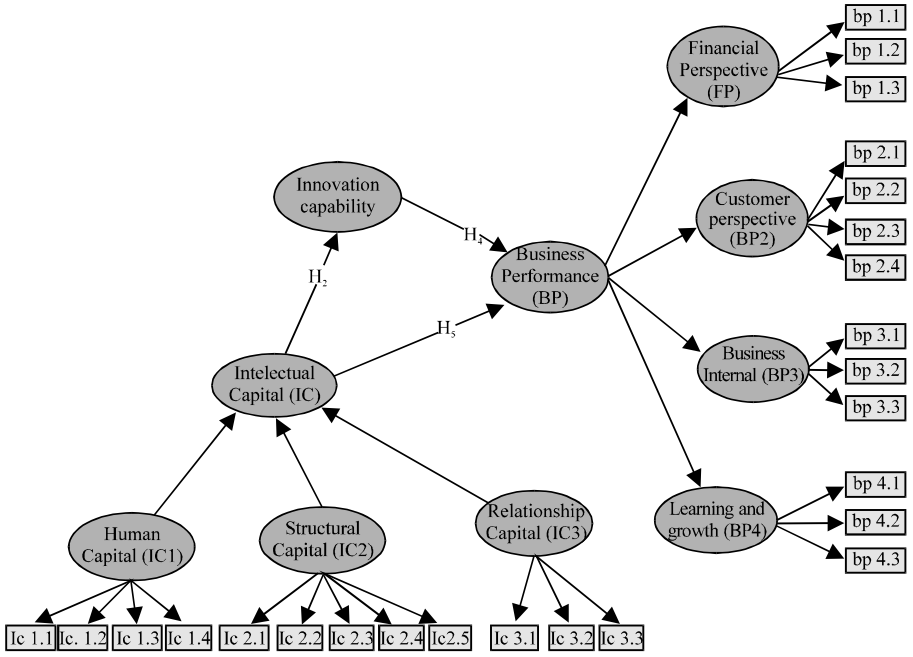

Fig. 2: Hierarchies formative-formative type model

Reflective second order model: Reflective uni-dimensional construct is measures as treated as outcomes of constructs. A reflective measurement model that is shown in Fig. 2 is recognized latent variable representing the SB and SM are sub-construct of Business Strategy (BS). The Next reflective model can be seen in innovation strategy (KI) as primary construct of second order hierarchies model supporting by sub-construct of Internal Factor (FI) and sub-construct of External Factor (FE). The last of reflective measurement model can be recognized as presented in Fig. 2 is the relation between primary construct of Business Performance (BP) that support by sub-contsruct of financial Perspective (PK), sub-construct of non, financial Perspective (PP), Business Internal (BI) and Learning with Growth (LG). When, we evaluate the hierarchies latent model type as we note in Fig. 2,

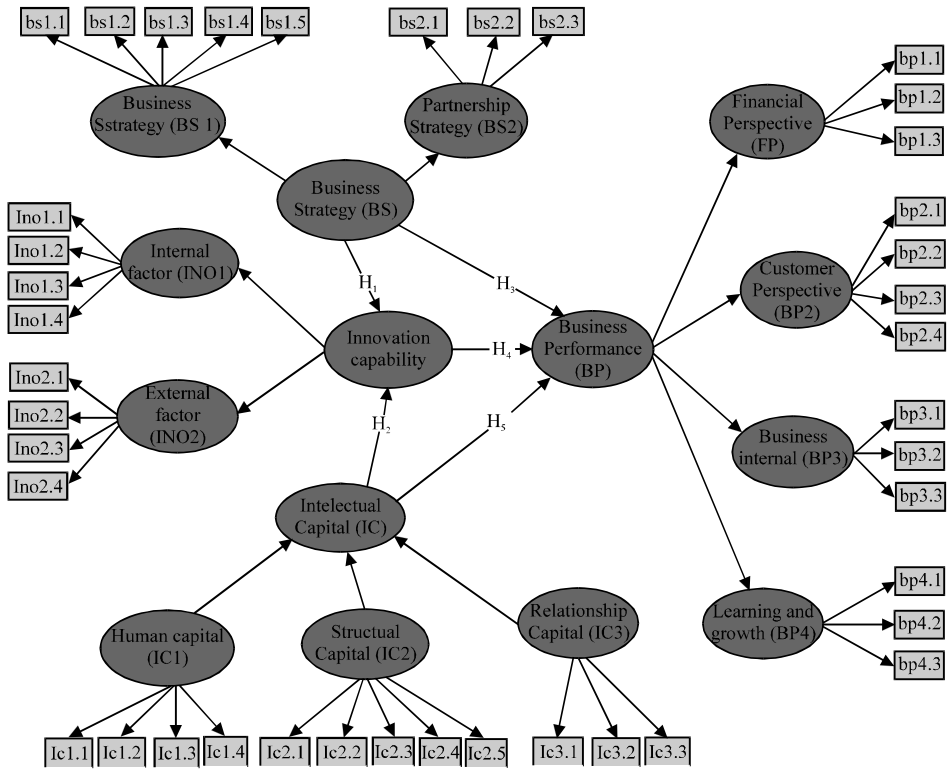

Fig. 3: Conceptual research model

we can defines the relation form as reflective-reflective model (Lin *et al*., 2005; Wetzel *et al*., 2009).

Reflective as the relation of sub-construct with its dimension is assumed to represent a single dimension, such that the measures describe the same underlying construct and each dimension is designed to capture the uni-dimensional as well as all indicators will be distributes as covary (Jarvis *et al*., 2003). Because the same is covary, reflective measures are conceptually interchangeable and removing any one of the measures would not alter the meaning or interpretation of the construct (Bollen and Lennox, 1991). However for the case of second order model, the relation of structural models used is conceptualized as the structural model of the reflective-reflective type model (Lin *et al*., 2005; Wetzels *et al*., 2009). The relation model of reflective-reflective type model can be seen in Fig. 3.

Formative second oder model: Formative measures have been distinguished as the measures of multidimensional and reflective measures on the other hands is assumed to represent as single dimension (Bollen and Lennox, 1991; Diamantopoulos and Siguaw, 2006). The main reason of this measures because of not the same dimension that formative measures are conceptually not interchangeable and removing any one of the measures would alter the meaning or interpretation of the construct (Damantopoulos and WInghover, 2001; Jarvis *et al*., 2003). Its can be note that the formative measurement are characterized as describing the multidimensional of construct (Bollen and Lennox, 1991). Hence, multidimensionality of formative cases are measure to be as guidelines for formative measurement that the arrow would be move directly from indicator to construct (Diamantopoulos and Siguaw, 2006; MacKenzie *et al*., 2005).

Two structural models used different conceptualization methods. The first group of structural model used the formatireflective-reflective type model as captures in Fig. 1 and the second type of second order model is design in formative-formative type model (Lin *et al*., 2005). The hierarchies second order model of formative-formative type model can be seen in Fig. 2.

The formative-formative second order model can be seen in Fig. 2 as the relation type of primary construct to sub-construct as inner-relation and sub-construct relation to its dimension can be characterized as outer-relation. The different between two concept that are reflective uni-dimensional and formative multi-dimensional will be the advantages of SEM PLS methods and his capability to solve both of reflective and formative constructs that is not possible for covariance SEM methods.

Table 2: Statistical report of Cronbach's alpha and KMO

Construct	Dimension	Cronbach's alpha	Discription	KMO MSA	Discription
Competitive strategy	bs1	0.744	Reliabel	0.810	Valid
Partnership strategy	bs2	0.723	Reliabel	0.796	Valid
Human capital	Ic1	0.786	Reliabel	0.741	Valid
Structural capital	ic2	0.747	Reliabel	0.806	Valid
Relationship capital	ic3	0.783	Reliabel	0.719	Valid
Internal factor	ino1	0.740	Reliabel	0.756	Valid
External factorl	ino2	0.730	Reliabel	0.785	Valid
Financial perspective	bp1	0.768	Reliabel	0.749	Valid
Customer perspective	bp2	0.743	Reliabel	0.723	Valid
Business internal	bp3	0.795	Reliable	0.731	Valid
Learning and growth	bp4	0.704	Reliable	0.737	Valid

Own calculation using SPSS Package (2016)

As discussed by Jarvis *et al*. (2003); Petter that for reflective model, indicator must be moved from construct to indicator, otherwise the formative model that the arrow must be move from indicator to construct. The formative model also note as arrow reverse (Diamantopoluos Winklhofer, 2001). The complete conceptual research model is presented in Fig. 3. Four hypotheses were built regarding aim of this work, i.e:

- H_1: business strategy positively affects the innovation capability
- H_2: intellectual capital positively affect innovation capability
- H_3: business strategy have positively affects to firms performance
- H_4: intellectual capital have positively effect to firms performance and
- H_5: innovation capability have positively effect to firms performance

RESULTS AND DISCUSSION

This research develops research perception using the instruments list of questions based on the measurement scale one to five categorical data. Our research instruments were developed and on the list of questions, compiled based on the theoretical concept and is sourced from a number of references. Research has been conducted in two parts is a testing phase research instrument that is by conducting elections against 30 respondents as the unit of analysis to be interviewed based on a list of questions has been prepared.

The quality of instruments: The objectives to be achieved from research activities at an early stage is to conduct an evaluation of the determination of the total sample as many as 30 respondents as trials to get the eligibility becomes important is implemented, it is likely caused by the list of questions is not understood by respondents, the presence of constraints for preparing the list of questions with the sentence excessive, inappropriate instrument measurement that causes data to be not valid and reliability. Tenenhouse *et al*. (2005) and Henseler *et al*. (2015) recommends testing samples of 30 respondents deemed sufficient to establish the quality of the list of questions through a test of reliability and validity of the test.

Research is doing some statistical testing procedure steps through the use of statistical tests of validity and reliability by leveraging the Software SPSS 17. To obtain eligibility reabilitasinstruen, this research uses statistical tests Cronbach's alpha that is by looking at the internal consistency through assessing the conditions of inter-item correlation of indicators testing the next phase is to analyze the feasibility of the instrument based on the validity of the research instrument. This research uses the concept of testing analysis factors Kaiser-Meyer-Olkin (KMO) recommended by Tabachnick and Fidell.

Test procedure for KMO has advantages of its own as it can be retrieved at once the validity of the respondent's answer to the questionnaire data against a list of questions asked, along with it also obtained answers to the formation of the multivariate normal distribution as a condition for the establishment of the analysis can be a factor in order to resolve the present initial stage of test statistics, namely the process of settlement of outer-model. If the retrieved value of KMO analysis results at least or more than 0.70, then declared the distribution of categorical data sourced from multivariate normal distribution. Based on the results of the analysis of the 30 respondents who have been interviewed, obtained Item validity and construct reliability for latent variable with reflective indicators can be assessed by observing item correlation and its Cronbach's alpha coefficient. Table 2 showed these values.

Outer model analysis: SEM PLS analysis involves two sub-type analysis, i.e., outer model analysis and inner model analysis. Outer model refers to the causal

Table 3: Reliabity test and results

Variables	Cronbach's alpha	rho_A	Composite reliability	AVE
BI:Busines Internal	0.697	0.742	0.828	0.619
BP4: Learning and Growth	0.704	0.723	0.833	0.625
FE: External Factor	0.735	0.748	0.835	0.562
FI: Internal Factor	0.741	0.747	0.837	0.563
PK: Non-financial	0.670	0.723	0.805	0.581
PP: Financial perspective	0.744	0.748	0.838	0.564
SB: Competitive strategy	0.735	0.740	0.825	0.486
SM: Partnership strategy	0.680	0.697	0.824	0.611

Own calculation in 2016

Table 4: Fornell Larscker determinant validity test

Items	BI	BP4	FE	FI	PK	PP	SB	SM
BI	0.7867	-	-	-	-	-	-	-
BP4	0.5106	0.7908	-	-	-	-	-	-
FE	0.2904	0.2606	0.7497	-	-	-	-	-
FI	0.3441	0.4791	0.3876	0.7501	-	-	-	-
PK	0.1439	0.0821	0.2146	0.1515	0.7624	-	-	-
PP	0.1914	0.1938	0.1766	0.1568	0.1984	0.7510	-	-
SB	0.4248	0.1823	0.3208	0.2661	0.1380	0.2531	0. 6971	-
SM	0.0753	0.1251	-0.0285	0.1352	-0.0161	-0.1950	0.1342	0.7815

Table 5: Heteortrait-monotrait ratio of determinant validity test

Items	BI	BP4	FE	FI	PK	PP	SB
BI	-	-	-	-	-	-	-
BP4	0.7135	-	-	-	-	-	-
FE	0.3942	0.36109	-	-	-	-	-
FI	0.4503	0.63095	0.5169	-	-	-	-
PK	0.2442	0.18495	0.2685	0.2779	-	-	-
PP	0.2832	0.25997	0.2536	0.2369	0.2629	-	-
SB	0.5771	0.29515	0.4383	0.3607	0.231	0.3448	-
SM	0.1409	0.23935	0.134	0.191	0.1394	0.2783	0.2348

relationship between constructs and structural model evaluates the causal relationships among constructs. Hair *et al.* (2012) explain the differentiate between reflective and formative measurement models in conducting outer model of SEM PLS analysis. Reflective outer models is connected with the internal consistency by observing Composite Reliability (CR) individual indicator reliability and Average Variance Extracted (AVE) to evaluate convergent validity.

The second step investigation of research instrument of reflective model is the validity test using Fornell-Lacker criterion and heterotrait-monotrait ratio that are used to assess the discriminate validity. Table 3 represents the reliability test of the research model. Based on Table 3, the reliability test result indicates the sign support for research instrument is distributed more then 0.650 for cronbach's alpha, rho_A and CA and also have support for AVE to be more then 0.50, the exception note competitive strategy dimension with 0.486. All statistical indicators would be indicates supporting the internal consistency and can conclude that the research instrument is reliable. The next steps of outer-model analysis is to investigate the validity test of the research instruments of reflective uni-dimension model. We evaluate the test procedure of validity using Fornel Larscker methods (Fornell and Larcker, 1981) and Heterotrait-Monotrait Ratio Model (Henseler *et al*., 2015). The two methods that as discussed in Fornell and Larscker (1981) and Henseler *et al*. (2015) can be found in calculation results of Tabel 4 and 5. Table 4 presented the discriminant validity existed because the square root of the AVE value on the diagonal for each latent variable was larger than the correlations among the latent variables. In this case, the Fornell-Larcker criterion is support discriminant validity (Table 4).

The second test evaluation of validity is heterotrait-monotrait ratio that presented in Table 5. Under SmartPls calculation, the computed HTMT values were distributed more than a half <0.85 so that we confirm discriminant validity.

For formative constructs, measurement analysis is done by observing the indicator's outer weight and its significance. Furthermore, one has to assure there is no collinearity exists among indicators. Once indicator is said to be a collinear with others if it VIF more then 3 (Wong, 2013; Hair *et al*., 2012). Noting all the indicators of sub-construct of human capital, structural capital

Table 6: The formative measurement model analysis result intellectual capital second order construct

Items	Original sample (O)	t-values	p-values	VIF
ic1.1 -> Human capital	0.500	2.265	0.012	1.323
ic1.2 -> Human capital	0.452	2.161	0.016	1.379
ic1.3 -> Human capital	0.171	0.733	0.232	1.667
ic1.4 -> Human capital	0.244	1.041	0.149	1.352
ic2.2 ->Structural capital	0.429	1.527	0.064	1.401
ic2.3 ->Structural capital	0.555	1.893	0.029	1.302
ic2.4 ->Structural capital	0.356	1.031	0.151	1.361
ic2.5 ->Structural capital	-0.067	0.211	0.417	1.602
ic3.2 ->Relational capital	0.738	2.666	0.004	1.164
ic3.2 ->Relational capital	0.385	1.410	0.008	1.102
ic3.2 ->Relational capital	0.188	0.616	0.269	1.123

Own data, analyzed in 2016

Table 7: The endogen R^2

Variables	R^2	R^2 adjusted
BP: Business performance	0.484	0.468
IC: Intellectual capital	0.992	0.992
KI: Innovation capability	0.253	0.237

Table 8: The statistical report and the level of significant

Items	Original sample	SD	t-statistics	p-values	Discriptions
BS-> BP	0.1474	0.1016	1.451	0.0736	Not support
BS-> KI	0.2208	0.1042	2.118	0.0173	Support
IC -> BP	0.4232	0.1086	3.896	0.0001	Support
IC -> KI	0.3729	0.1060	3.518	0.0002	Support
KI > BP	0.2949	0.1018	2.898	0.0020	Support

Own data analyzed in 2016

and relational capital that more then 3, so that we concluded that collinearity issues does not exists in measuring this construct. However, we have some notes that sixth indicators have p>5% and five are <5% and supporting with free of collinearity than we believe that formative model give enough the quality of information.

Structural model analysis: Structural model relates to causal relationship among constructs (Bollen nd Lennox, 1991). We used SEM PLS that more focus on prediction orientation. SEM PLS does not relied on normal assumption for errors distribution and uses bootstrapping technique to estimate model's parameters. This technique is available in SmartPLS 3.2.6.

The assessment of inner model is conducted by examining the path values that represent the direct effects of exogenous on endogenous constructs. In addition, one has to note the R^2 of endogenous constructs. The R^2 indicates the amount of variance in the endogenous construct explained by all of its respective exogenous. According to Chin (1998) threshold values to claim an endogenous construct has weak, moderate or substantial predictive accuracy are 0.19, 0.33 and 0.67. Table 6 and 7 showed the R^2 and R^2 adjustment of the endogen latent variable.

From Tabel 8, we noted only four of five hypotheses were made are significant. However, Business Strategy (BS) did not show significant effect on Business Performance (BP). To be expanded as shown in Fig. 4, business strategy is highly reflected by competitive Strategy (SB) with estimation of 0.942 rather than by partnership strategy that only reflected by 0.422. We take as important note for the case of insignificant relation of business strategy to business performance with opening solution for indirect effect to business performance by mediation process of innovation capability (KI) as mediator, so that the possibility to have full mediation (Baron and Kinny, 1986) otherwise, there are possibility for Intellectual Capital (IC) to have partial mediation because the relation between IC to BP is significant (Hair *et al*., 2012).

The four constructs of this research have contains twelve sub dimensions but with only two mediation detection. First is the indirect effect of Business Strategy (BS) to Business Perfoemance (BP) through Innovation capability (KI). Second, is the indirect effect relation of Intellectual Capital (IC) to Business Perfoemance (BP) through Innovation capability (KI). The calculation process of mediation is followed using product indicator as discuss by Chin, Nietze, Zhao.

This research also notes the other information support from second order construct of intellectual capital that have impact contribution of sub construct of Human Capital (HC) with 0.728 and of sub construct of structural capital with contributed of 0.529 and relational capital is only contributed of 0.022. We have than summarize that relationalcapital is empirically can be ignored as supporting the intellectual capital.

The last one to be notes is business performance that reflective by five sub dimensions of business internal is 0.785, learning and growth is 0.778 by non financial perspective is 0.544 and by financial perspective is 0.412. We than summarized that in the perceived of business performance dimension in small firms case of Jombang regency, east Java Indonesia, business internal and learning perspective of organization more important aspects rather than financial and non-perspectives (Fig. 4).

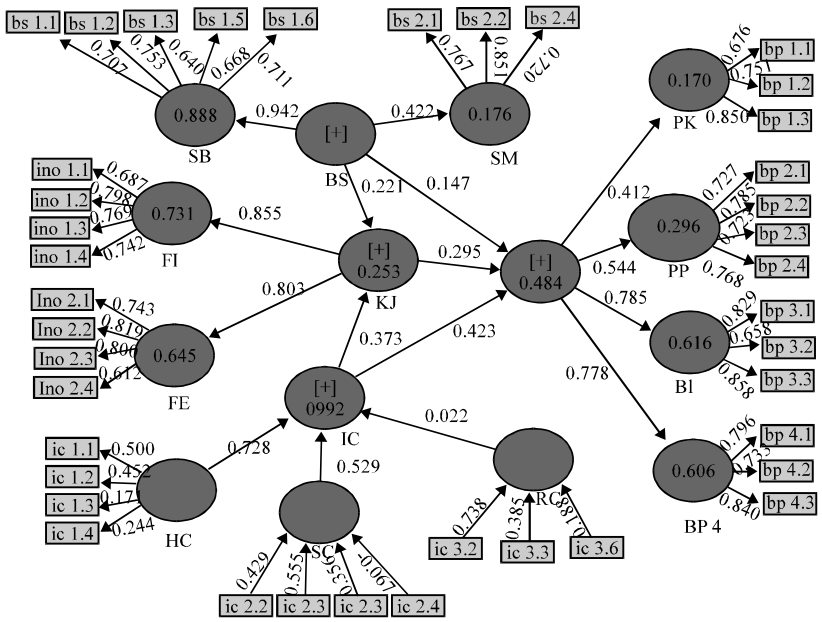

Fig. 4: Path anaylysis and estimation

The growing literature of small business discussion, Man *et al.* (2002) and also Barnmey and Clark (2007) have related the same direction with this empirical research. The statistical results of this research found that business strategy is affect significantly to innovation capability of the small firms, i.e., the component of knowledge, experience and skills of the employee. This research also have strong link to Bontis *et al.* (2000) and Stewart (1997) for the function for delivering information and knowledge that be able to determine the value and superiority of the company in the long term.

The second aspect of this research is the role of intellectual capital to support innovation capability and therefore influencing bus8iness perpermance in ling run. A research has been conduct by Firer and Williams (2003) and Chen *et al.* (2005) have notes the same direction with this research. The intellectual capital of small firms condition in this research indicated the strong significant effect to innovation capability and directly also to business performance as Tan *et al.* (2007) found in Singapore.

However, this research is conduct and search the many type of industry in the group of small industrial firms so that the focus object and conculsions support of any kinds of industry fail to explain. In the research conduct of many type of small industries, Benny and He (2008) reported the positive impact of Intellectual Capital (IC) against the performance of a company that supported link with this research. This research is doing more investigation on mediation effect of business strategy

Table 9: Statistical result of indirect effect

Items	Original sample	Sample Mean (M)	SD	t-statistics	p-values
BS -> BP	0.065116	0.066714	0.039285	1.657556	0.0491
IC -> BP	0.109992	0.115820	0.054011	2.036483	0.0211

construct and intellectual capital, both of constructs would be impact business performance through innovation capability as mediator. The calculation using product indicator approach bases on SmartPLS 3.2.6 calculation can be seen in Table 9.

According to statistical test of p-values we have decide to reject Business Strategy (BS) as becoming mnediated by innovation capability to business performance because the statistic t-values is <1.96 (Preacher *et al.*, 2010) for bootstrapping methods of 500 sample used. In this case, we have strongly believe that intellectual capital is mediated successfully by innovation capability for encouraging business performance (Preacher and Hayes, 2004).

We have some notes of this research found based on statistical analysis that the increasing component support of intellectual capital in turns will increase significantly the competitive advantage development's dimensions such as innovation to have positive impacts to business performance.

CONCLUSION

The results of this work gave explanations regarding the causal relationship between business strategy,

intellectual capital and business performance of small business firms of many type industries in Jombang regency East Java Indonesia. As an exogenous construct, both of business strategy and intellectual capital showed significant effect on innovation capability but as we discuss before, business strategy fail to have positive and significant level directly to business performance. However, this research has found four hypothesis successfully answered.

Our important research notes is the form of innovation capability of the small firms as strategic mediated of intellectual capital to be jointly strengthen business performance of small business firms in Jombang regency east Java Indonesia. The intellectual capital component also have directly effect to business performance, hence we than in turn of summarized that the more increasing of intellectual capital contributed than the more the business performance more sustainable. At the end of the relationship, we showed the more quality of innovation capability driven from intellectual caopital, the more competitive advantages of Small Management Enterprise (SME's) that as an empirical evidence of this research.

LIMITATIONS

This study's results are subject to certain limitations that need to be considered. First, this study is developed many type of industries of small business management, so that needs for more focus of the industrial firm type to have more detail attitude and business performance integrated with the business strategy, intellectual capital and innovation process to affect business performance.

Finally, the inherent algorithm on which the PLS-SEM is based on a time periods of primary data, hence this limitation of data survey should not guarantee to predict as an establishment attitude in the future. The research activities using longitudinal data will be need to ensure the behavior change of community participation as the main construct in determining the tourism destination quality.

REFERENCES

Akgun, A.E., I. Kocoglu, H. Keskin, H. Ince and S.Z. Imamoglu, 2010. The relationship between intellectual capital, innovation and competitive advantage. Proceedings of the 5th European Conference on Innovation and Entrepreneurship, September 16-17, 2010, Greece.

Barbara, G.T., L.S. Fidell and S. Linda, 2007. Using Multivariate Statistics. 5th Edn., Pearson, New York, USA., ISBN:9780205465255, Pages: 980.

Barney, J.B. and D.N. Clark, 2007. Resource-Based Theory: Creating and Sustaining Competitive Advantage. Oxford University Press, New York, USA., ISBN-13: 978-0199277698, Pages: 350.

Barney, J.B. and P.M. Wright, 1998. On becoming a strategic partner: The role of human resources in gaining competitive advantage. Hum. Resour. Manage., 37: 31-46.

Barney, J.B. and W.S. Hesterly, 2008. Strategic Management and Competitiv Advantage: Concepts and Case. 2nd Edn., Pearson Education International, Upper Saddle River, New Jersey, USA., ISBN: 9780131355026, Pages: 380.

Barney, J.B., 1991. Firm resources and sustained competitive advantage. J. Manage., 17: 99-120.

Baron, R.M. and D.A. Kenny, 1986. The moderator-mediator variable distinction in social psychological research: Conceptual, strategic and statistical considerations. J. Pers. Social Psychol., 51: 1173-1182.

Becker, J.M., K. Klein and M. Wetzels, 2012. Hierarchical latent variable models in PLS-SEM: Guidelines for using reflective-formative type models. Long Range Plann., 45: 359-394.

Bollen, K. and R. Lennox, 1991. Conventional wisdom on measurement: A structural equation perspective. Psychol. Bull., 110: 305-314.

Bontis, N., W.C.C. Keow and S. Richardson, 2000. Intellectual capital and business performance in Malaysian industries. J. Intell. Capital, 1: 85-100.

Bukh, N.P., C. Nielsen, P. Gormsen and J. Mouritsen, 2005. Disclosure of information on intellectual capital in Danish IPO prospectuses. Accounting Auditing Accountability J., 18: 713-732.

Chang, S. and J. Hsieh, 2008. A human capital-driven framework and the role of technological capital in measuring intellectual capital. BA Thesis, University of Oregon, Eugene, Oregon.

Chen, M.C., S.J. Cheng and Y. Hwang, 2005. An empirical investigation of the relationship between intellectual capital and firms market value and financial performance. J. Intell. Capital, 6: 159-176.

Chin, W.W., 1998. The Partial Least Squares Approach to Structural Equation Modelling. In: Modern Methods for Business Research, Markoulides, G.A. (Ed.). Lawrence Erlbaum, Mahwah, New Jersey, USA., pp: 295-336.

Diamantopoulos, A. and H. Winklhofer, 2001. Index construction with formative indicators: An alternative to scale development. J. Marketing Res., 38: 269-277.

Diamantopoulos, A. and J.A. Siguaw, 2006. Formative versus reflective indicators in organizational measure development: A comparison and empirical illustration. Br. J. Manage., 17: 263-282.

Firer, S. and S.M. Williams, 2003. Intellectual capital and traditional measures of corporate performance. J. Intellectual Capital, 4: 348-360.

Fornell, C. and D.F. Larcker, 1981. Structural equation models with unobservable variables and measurement error: Algebra and statistics. J. Market. Res., 18: 382-388.

Grant, R.M., 1996. Toward a knowledge-based theory of the firm. Strategic Manage. J., 17: 109-122.

Gray, B.J., S. Matear and P.K. Matheson, 2002. Improving service firm performance. J. Serv. Marketing, 16: 186-200.

Gunasekaran, A., P. Okko, T. Martikainen and P. Yli-Olli, 1996. Improving productivity and quality in small and medium enterprises: Cases and analysis. Intl. Small Bus. J., 15: 59-72.

Hair, J.F., M. Sarstedt, C.M. Ringle and J.A. Mena, 2012. An assessment of the use of partial least squares structural equation modeling in marketing research. J. Acad. Market. Sci., 40: 414-433.

Henseler, J., C.M. Ringle and M. Sarstedt, 2015. A new criterion for assesing discriminant validity in variance-based structural equation modeling. J. Acade. Marketing Sci., 43: 115-135.

Hitt, M.A, D.I. Ireland and R.E. Hoskisson, 2011. Strategic Management: Competitiveness and Globalization; Concepts Only. South-Western's Publishing, Canada, ISBN:9781408019221, Pages: 624.

Jarvis, C.B., S.B. Mackenzie and P.M. Podsakoff, 2003. A critical review of construct indicators and measurement model misspecification in marketing and consumer research. J. Consumer Res., 30: 199-218.

Kaplan, R.S. and D.P. Norton, 1996. The Balanced Scorecard: Translating Strategy into Action. 1st Edn., Harvard Business Review Press, Boston, MA., USA., ISBN: 978-0875846514, Pages: 336.

Lee, T.S. and H.J. Tsai, 2005. The effects of business operation mode on market orientation, learning orientation and innovativeness. Ind. Manage. Data Syst., 105: 325-348.

Lin, C.H., P.J. Sher and H.Y. Shih, 2005. Past progress and future directions in conceptualizing customer perceived value. Int. J. Ser. Ind. Manage., 16: 318-336.

Lin, C.Y.Y. and Y.C.M. Chen, 2007. Does innovation lead to performance? An empirical study of SMEs in Taiwan. Manage. Res. News, 30: 115-132.

Ma, H., 2004. Toward global competitive advantage: Creation, competition, cooperation and co-option. Manage. Decis., 42: 907-924.

MacKenzie, S.B., P.M. Podsakoff and N.P. Podsakoff, 2011. Construct measurement and validation procedures in MIS and behavioral research: Integrating new and existing techniques. MIS Quarterly, 35: 293-334.

Man, T.W.Y., T. Lau and K.F. Chan, 2002. The competitiveness of small and medium enterprises: A conceptualization with focus on entrepreneurial competencies. J. Bus. Ventur., 17: 123-142.

Montequin, V.R., F.O. Fernandez, V.A. Cabal and N.R. Gutierrez, 2006. An integrated framework for intellectual capital measurement and knowledge management implementation in small and medium-sized enterprises. J. Inform. Sci., 32: 525-538.

Porter, M.E., 1985a. Competitive Advantage: Creating and Sustaining Superior Performance. Free Press, New York, USA., ISBN-13: 9780029250907, Pages: 557.

Porter, M.E., 1985b. Competitive Advantage: Creating and Sustaining Superior Performance. The Free Press, New York.

Porter, M.E., 1990. The Competitive Advantage of Nations. Free Press, New York, USA., ISBN:9780029253618, Pages: 855.

Preacher, K.J. and A.F. Hayes, 2004. SPSS and SAS procedures for estimating indirect effects in simple mediation models. Behav. Res. Meth. Instrum. Comput., 36: 717-731.

Preacher, K.J., M.J. Zyphur and Z. Zhang, 2010. A general multilevel SEM framework for assessing multilevel mediation. Psychol. Methods, 15: 209-233.

Romijn, H., 1998. Acquisition of Technological Capability in Small Firms in Developing Countries. Macmillan, London, England, UK., ISBN:9780333732199, Pages: 374.

Stewart, T.A., 1997. Intellectual Capital: The New Wealth of Organizations. Doubleday Publishing, London, England, ISBN:9780385482288, Pages: 261.

Tan, H.P., D. Plowman and P. Hancock, 2007. Intellectual capital and financial returns of companies. J. Intell. Capital, 8: 76-95.

Tenenhaus, M., V.E. Vinzi, Y.M. Chatelin and C. Lauro, 2005. PLS path modeling. Comput. Stat. Data Anal., 48: 159-205.

Wetzels, M., G.O. Schroder and C.V. Oppen, 2009. Using PLS path modeling for assessing hierarchical construct models: Guidelines and empirical illustration. MIS. Q., 33: 177-195.

Wheelen, L.T. and D.J. Hunger, 2012. Strategic Management and Business Policy: Towards Global Sustainability. 13th Edn., Pearson Prentice Hall, New Jersey, ISBN: 9780132570206, Pages: 911.

Wong, K.K.K., 2013. Partial least squares structural equation modeling (PLS-SEM) techniques using Smart PLS. Marketing Bull., 24: 1-32.

Wu, M.F., 2012. The effects of balanced scorecard implementation on the intellectual capital accumulation of Taiwan-listed IT companies: Using corporate innovation activities as the moderator. Master Thesis, Takming University of Science and Technology, Taipei, Taiwan.