Muafi[1]

THE ROLE OF ROBUST BUSINESS MODEL IN ENSURING EXTERNAL FIT AND ITS IMPACT ON FIRMS IN SOCIAL PERFORMANCE

This study aims to analyze the role of robustness towards external fit and its impact on environmental and social performance. The study was conducted on manufacturing SMEs in the city of Yogyakarta (Indonesia). Primary data was obtained from questionnaires and interviews with some respondents, whereas secondary data was collected from publications of relevant organizations. The statistical technique used is partial least square method. The study concluded that robustness in organization provides a significant contribution to ensuring the external fit and also impacts environmental and social performance.

Keywords: *business robustness; external fit; social role of business; base of pyramid.*

Муафі

РОЛЬ СТІЙКОЇ БІЗНЕС-МОДЕЛІ У ЗАБЕЗПЕЧЕННІ ВІДПОВІДНОСТІ ФІРМИ ЗАПИТАМ СЕРЕДОВИЩА ТА ЇЇ ВПЛИВ НА СОЦІАЛЬНІ ПОКАЗНИКИ РОБОТИ

У статті проаналізовано роль стійкої бізнес-моделі у формуванні відповідності фірми її навколишньому середовищу, що відображається через соціальні показники бізнесу. Дослідження було проведене на матеріалах малих та середніх виробництв м. Джокьякарта (Індонезія). Первинні дані було отримано з опитування та інтерв'ю, а вторинні – з публікації галузевих організацій. Для статистичного аналізу використано метод часткових найменших квадратів. Доведено, що стійкість бізнес-моделі значною мірою впливає на відповідність фірми запитам середовища, що своєю чергою відбивається на соціальних показниках роботи підприємства.

Ключові слова: *стійкість бізнесу; відповідність підприємства запитам середовища; соціальна роль бізнесу; основа соціальної піраміди.*

Рис. 1. Табл. 2. Літ. 26.

Муафи

РОЛЬ УСТОЙЧИВОЙ БИЗНЕС-МОДЕЛИ В ОБЕСПЕЧЕНИИ СООТВЕТСТВИИ ФИРМЫ ЗАПРОСАМ СРЕДЫ И ЕЁ ВЛИЯНИЕ НА СОЦИАЛЬНЫЕ ПОКАЗАТЕЛИ РАБОТЫ

В статье проанализирована роль устойчивой бизнес-модели в формировании соответствия фирмы её окружающей среде, что отображается через социальные показатели бизнеса. Исследование было проведено на материалах малых и средних производств г. Джокьякарта (Индонезия). Первичные данные были получены из опроса и интервью, а вторичные – из публикаций отраслевых организаций. Для статистического анализа использован метод частных наименьших квадратов. Доказано, что устойчивость бизнес-модели в значительной мере влияет на соответствие фирмы запросам среды, что в свою очередь отражается на социальных показателях работы предприятия.

Ключевые слова: *устойчивость бизнеса; соответствие предприятия запросам среды; социальна роль бизнеса; основа социальной пирамиды.*

Introduction. Poverty has become a strategic issue in developing countries. Base of Pyramid (BoP) approach is often referred to as one of the approaches to alleviating poverty and has become a significant issue in managerial agenda (Klein, 2008).

[1] University Pembangunan Nasional "Veteran", Yogyakarta, Indonesia.

Indonesia has high levels of poverty, with more than 50% of its population living on less than 2 USD a day. Poor Indonesians face insecure livelihoods, lack of access to basic services, limited opportunities for economic advancement, and lack of power to influence their situation (Clay, 2005). In the province of Daerah Istimewa Yogyakarta (DIY) – Indonesia, statistics shows that poverty had reduced by only 0.85% throughout 2013. Up until now, the number of poverty in DIY is still 15.03%, the government of DIY admitted that their target has not been achieved (www.koran-sindo.com, 2013).

Several studies, both empirically and theoretically, have proven that SMEs have a very important role in promoting economic growth of a country (Levy and Powell, 2005; Muafi, 2009, Muafi et al., 2012a, 2012b; Stel et al., 2004). In 2013, in Indonesia, micro and small manufacturing kept growing amid slow national economic growth and the global economic downturn. Although it is believed to keep on growing, the rate of manufacturing sector's performance until the end of 2014 experienced a slowdown (Media Industry, 2013). All this time, BoP still relies on large firms in terms of creating innovation for products, technologies, services, since business models that are rarely implemented in manufacturing SMEs. Cocreation according to the BoP approach assumes that all this time, poor consumers are exploited only as unattractive consumers, that they are not profitable, and are often a source of problems (Prahalad, 2005). However, Tambunan's research (2008) explained that SMEs in Indonesia have provided some contributions in the form of: a) establishing business units up to 80–90% of all existing business units; b) providing more than 60% of private sector employment; c) generating 50–80% of the total employment; d) contributing about 50% of all sales or added values; e) providing a 30% advantage of the total direct exports.

This study was conducted on manufacturing SMEs in Yogyakarta by replicating a study model by M. Klein (2008). The mentioned model emphasized the importance of robustness' role in ensuring external fit and its impact towards environment and social performance under BoP approach.

Literature review and hypotheses.

1. Base of Pyramid (BoP). M. Klein (2008) offered a poverty alleviation model for developing countries via sustanable strategic business model and improving continuous performance under BoP approach. The idea of BoP itself is that unique characteristic and economic activities of the bottom-class society could give opportunities for the private sector to grow and innovate. C.K. Prahalad (2005) added that BoP approach is based on the economic pyramid that consists of 4 layers where the top layer is the least of population with the highest purchasing power and the bottom layer represents the biggest share of population.

BoP refers to the socioeconomic group of society with low incomes (Klein, 2008). This is often defined in economic terminology as people with the purchasing power for 2 USD or less per day – which includes more than half the world's population (World Bank 2006), including Indonesia. In Indonesia, BoP is those who earn less than 4 USD per day (Indonesian iBoP Newsletter, November 2009). There are 3 categories: the wealthy at the top, the middle class in the middle, and the Base of Pyramid (BoP). Those included in BoP are those with the purchasing power of 2 USD or less although there is also an opinion that 4 USD or less per day (that is

1,500 USD or 3,000 USD a year). Emerging middle class consists of those with the purchasing power of 3,000–5,000 USD a year while the wealthy class has the purchasing power of more than 15,000 USD per year. The bottom class is often used by major companies as consumers to gain benefits. This idea also recommends that poverty alleviation can be fulfilled if major companies have greater commitment to serve the bottom layer market. The idea of C.K. Prahalad (2005) on bottom layer use has been criticized by A. Karnani (2007). Major companies are advised to not only seek for benefit by utilizing the bottom layer society, the bottom layer should also be motivated as a part of business ecosystem. They can work together as strategic partners (Porter and Kramer, 2006). Therefore, governments need to play an important role in creating and developing a business ecosystem. It needs to be realized that successful major companies need "healthy" society with education, healthcare and employment opportunities (Porter and Kramer, 2006).

2. Robustness and external fit. According to the dictionary definitions of "organization" and "healthy," it can be stated that healthy organization is "an association of people governed by a set of regulations as a function of specific purposes, with good health and healthy appearance. Healthy organization can be defined as ... an association of people governed by a set of regulations as a function of specific purposes, in a state of complete physical, mental and social well-being, and not merely the absence of disease, but with the capacity to develop its own potential to respond positively to environmental challenges (Tarride et al., 2008).

M. Klein (2008) explained that external fit from a business model may happen when SMEs has a robust business model. F. Mas'ud (2004) added that a robust organization is an organization with authority structure, value system, norm, incentive system, and sanction that operate properly so that to support organization's objectives as well as the welfare of the organization overall. Some of the most commonly used standards to measure organization robustness are: work spirit, organizational commitment, work productivity, and organizational climate. A healthy organization has a clear vision and mission and is consistent with the basic principles within the organization. Organizational environment that has mutual respect, trust, openness, and fairness in compensations enables its members distribute their skills as well as have no fear. Besides, organization can adapt well to external environment. In order to improve organization robustness, the following are essential: 1) engaging employees; 2) embracing meaningful use of health benchmarks and metrics; 3) senior management participation in innovative policies; 4) supporting individuals' financial security aspirations; 5) aligning meaningful incentives; 6) helping people get the best of their life (Chenoweth, 2011). M. Klein (2008) proved that organization robustness has a positive and significant influence on its external fit.

H1. SMEs robustness has a positive and significant influence on external fit.

3. External fit, environmental performance and social performance. External fit refers to environmental fit and companies adapting themselves to optimize their business environment use. Furthermore, external fit can be defined as a business model which is better valued by business environment. High external fit is effective and efficient on companies that are able to achieve the objective expected. In other words, high external fit increases organizational performance, such as financial performance, environmental and social performance (Klein, 2008). Company's objective in

serving BoP should not just be financial-oriented but also social-oriented. The reason is that business environment of the company that uses BoP approach preferres social values. This is because one's standard of living on the bottom layer is very low where generally they are only able to afford primary needs and are often organized in social networks. Requirement adjustment from the environment and building up the strength of social networks, including social behavior, will have a positive social influence. M. Klein (2008) noted that a unique resource may be able to prevent threats faced by the company in its external environment and can reduce company's needs to adapt their strategy in order to achieve the external fit. Furthermore, a flexible business model is a model that can maintain external fit through responsive adjustments to environmental uncertainty and heterogenity.

Dynamic environment has more influence on entrepreneurial strategies in improving their organizational performance (Covin and Slevin, 1989). The results of Luo's study (1999) also explained that there is no significant influence of static environment towards innovation, proactive behavior, and high risk in improving organizational performance. B.A. Lukas et al. (2001) added that the interaction between a dynamic environment and prospective strategies influences on business performance. Muafi (2009) also explained that at manufacturing companies in East Java dynamic environment influences the competitive strategy by improving export performance. Indeed, high fit with external environment can improve organizational performance of SMEs (Klein, 2008).

A. Karnani (2007) stressed that, in a more formal way, companies on BoP that operate under dynamic business model quality are not only aiming to make profit but also to motivate and encourage social and environmental performances. Companies should not only aim at business success but also at economic development through poverty reduction, encouraging new investments, creating employment opportunities, building local capacity, and expanding options for new products and services for poor consumers. The result of Klein's study (2008) support (Karnani, 2007) in that external fit positively and significantly influences social and environmental performances. This confirms that SMEs contribute significantly to poverty eradicating.

H2. External fit has a positive and significant influence on SMEs' social performance.

H3. External fit has a positive and significant influence on SMEs' environmental performance.

Study methodology. The survey was conducted among manufacturing SMEs that build a healthy and dynamic business model. The population in this study is all manufacturing SMEs in Yogyakarta. Manufacturing SMEs in Yogyakarta is growing rapidly, so it is necessary to study business models that can be used to alleviate poverty. Manufacturing SMEs in Yogyakarta have been proven capable of supporting Indonesian economy during the monetary crisis. Respondents in this study are the leaders/heads of companies that represent manufacturing SMEs.

The targeted respondents were 200 manufacturing SMEs, the sampling technique used in this study was purposive sampling. There were 123 respondents that returned their questionnaires (the response rate is 62%). The types of data used are primary and secondary data through questionnaires and publication of the related institutions. The questionnaires were the closed ones. Scaling technique used for

external fit (Exter), robustness (Rob), environmental performance (EP), and social performance (SP) was the Likert scale with 7 options: from 1 for very strongly disagree to 7 for very strongly agree. The items for each variable are referred to M. Klein (2008) with: 7 items for external fit, 4 items for robustness degree, 16 items for social performance, and 10 items for environmental performance. The data analysis technique is PLS (partial least square). PLS is a powerful technique to analyze latent variables in structural equation model with various indicators (Sirohi et al., 1998). PLS also does not require data with normal distribution (Roostika, 2011). Validity and reliability tests with PLS showed that all items have the value above 0.5 for validity and a cut off point above 0.6 for reliability test (Hulland, 1999; Roostika, 2011).

Results.

1. Respondents description. The respondents' characteristics in this study can be described by business type, age of company, and the number of employees. The results show that most of the respondents are operating in the food industry (112 respondents – 91%), that is run for less than 5 years (58 SMEs – 47%) and with employees of less than 50 people (12 SMEs – 6%).

2. Validity and reliability measurement. Validity and reliability measurement used were PLS. Convergent validity test was used for the loading factor test with cut off point greater than 0.5 (Hair et al., 1995). The result shows that all the items have values more than 0.5 (Table 2).

3. Hypotheses test. The result of the hypotheses test between variables can be seen in Table 1 and Figure 1.

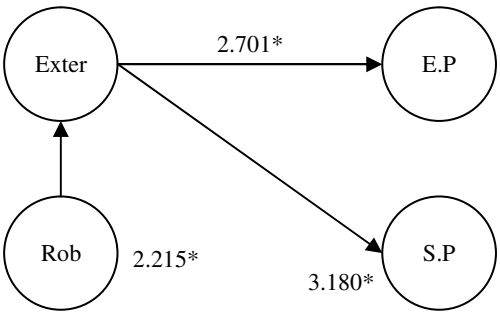

Figure 1. **The influence of robustness on external fit and its impact on environmental and social performance: base of pyramid approach,** *author's*

Table 1. **Path coefficients,** *author's*

Path coefficient	CR	Sign	Result
H_1 : Rob → Exter	2.215	0.000	H1 is accepted
H2 : Exter → EP	2.701	0.007	H2 is accepted
H3 : Exter → SP	3.180	0.001	H3 is accepted

* significant at 5%.

Discussion and conclusion. The results showed that robustness has a positive and significant influence on ensuring the external fit. These results support the study by M. Klein (2008) who stated that external fit from business model may happen when SMEs have a robust business model. Manufacturing SMEs in Yogyakarta have fully

acknowledged that robust business is a business designed to anticipate changes in a volatile environment, that requires adjustments to market demands and innovation, a healthy financial condition, and stable employees. Unfortunately, SME owners are lacking skills and expertise to manage their organizations robustly. They need support from the community and the government. They should be able to fulfill market demands by seeking and considering their resources. They have realized they need to produce unique and creative products. This is in accordance with the advice in (Thomke and Hippel, 2002).

Table 2. **Item loading and reliability,** *authors*

Variable	Item	Standardized Loading	Cronbachs Alpha
External fit (Exter)	Exter 1	0.760	0.621
	Exter 2	0.567	
	Exter 3	0.677	
	Exter 4	0.830	
	Exter 5	0.732	
	Exter 6	0.560	
	Exter 7	0.657	
Robustness (Rob)	Rob 1	0.612	0.680
	Rob 2	0.772	
	Rob 3	0.743	
	Rob 4	0.717	
Social performance (SP)	SP1	0.560	0.601
	SP2	0.871	
	SP3	0.555	
	SP4	0.612	
	SP5	0,632	
	SP6	0.614	
	SP7	0.571	
	SP8	0.620	
	SP9	0.580	
	SP10	0.733	
	SP11	0.590	
	SP12	0.612	
	SP13	0.743	
	SP14	0.564	
	SP15	0.633	
	SP16	0.640	
Environmental Performance (EP)	EP1	0.599	0.641
	EP2	0.601	
	EP3	0.654	
	EP4	0.590	
	EP5	0.619	
	EP6	0.623	
	EP7	0.594	
	EP8	0.711	
	EP9	0.658	
	EP10	0.567	

Other results showed that external fit has a positive and significant influence on environmental performance and social performance. These results support the study by M. Klein (2008) and A. Karnani (2007). Environmental performance in this study

was measured by two indicators: health of the environmental system and environmental stresses. Both hold an important role so that SME owners need to pay attention to these aspects. Social performance in this study includes 5 indicators: employment and income, safety and security, governance, quality of life and public service. Owners of manufacturing SMEs generally fully acknowledged that the main objective in business is not only financial profit but also paying attention to social aspect. High unemployment in the area have become a force for manufacturing SMEs to work twice as hard in developing their businesses. It needs to be acknowledged that running a business is inseparable from society, which means a business must contribute to population and environment where they operate (Smith, 2007). The findings of this study provided implications that companies like manufacturing SMEs should have a dynamic business model to stay healthy and have a high external fit so that they can improve their environmental and social performance. The limitations in this study are as follows: 1) data was collected from one source only, which is the perception of top management/owner of certain manufacturing SMEs; 2) this study used subjective responses of individuals; 3) this study did not use indepth interviews because there was a concern that the results will not fully represent the actual condition.

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