

INCORPORATING SUSTAINABILITY INTO SMALL BUSINESS INNOVATION

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Abstract: To win the increasingly fierce competition, small and medium micro enterprises (SMEs) are required to consistently innovate. However, when performing innovation, they should not only give priorities to profit, but also have awareness to human and the environment. This is appropriate with the triple bottom line principles of sustainable development, i.e. financial, social, and environmental. This research was conducted with purposes to describe how SMEs in Indonesia incorporate sustainability into their business innovation; to recognize internal and external factors which trigger sustainable innovation and also to identify the obstacles faced by SMEs in implementing it. The case study was taken from food processing SMEs in Surabaya as one of the prioritized industries in East Java. The survey method was used to get primary data from 100 respondents through questionnaire. Based on the results it can be recognized internal trigger factors of sustainable innovation among SMEs, i.e product (product remains favored, quality improvement, and product uniqueness), profit, business owner, and competitive advantage; while external trigger factors are consumers, competitors, government, and other parties. Internal obstacles of SMEs in sustainable innovation implementation are lack of human resource, time and money restriction, and the reluctance to perform innovation; whereas external obstacles are lack of information and lack of government support.

Keywords: Sustainable Innovation, Trigger Factors, Obstacles, SMEs

1 INTRODUCTION

Small and Medium Business which is familiar with Small and Medium Enterprises (SMEs) has an important role in the economy of a country, even in Indonesia. Currently, SMEs can be regarded as the backbone of Indonesia's economy which contributed 57% to the Gross Domestic Product of Indonesia and also absorbed up to 97% workers (Politik Indonesia, 2013). In 2013 there were 6.8 million SMEs in East Java, which rose 2 million in number from 2012, so that the Gross Domestic Product (GDP) of East Java reached Rp. 1,012 trillion. (Suara Surabaya, 2013). In order to survive and to deal with competitors, SMEs need to innovate continuously. Innovation is a key to the growth of SMEs as it provides firms with a competitive edge over other firms in the industry.

Generally SMEs have classic barriers related to unskilled human resources, management skills inadequacy, and lack of financial access and market, as well as information and technology constraints (Hardono, 2006). Furthermore, in performing their business, SMEs get less publicity and a little support from the community and the media spotlight, which makes them less aware of environmental issues. As a result, SMEs tend to be indifferent to the implementation of environmentally friendly practices, which usually requires more capital and public inspection. SMEs are likely reluctant to implement sustainability because it does not seem to affect the company's financial performance significantly (Prabawani, 2013). Nevertheless, because of their lack of knowledge and lack of an understanding of the environmental impacts and the limited use of the updated technology production, activities of SMEs contribute high enough to pollute the environment (Indonews, 2014). Moreover, the environmental management is often considered burdensome by the SMEs, so that it is not managed properly. One result of misproper environmental handling is a pollution which can cause social conflict and give an impact on the

availability of clean water and sanitation, as well as prohibition or restriction of SMEs products by the importing countries. For that reason it is necessary that when accomplishing innovation SMEs do not only pay attention to the profit, but also an impact of their innovation on the environment and society. In other words, SMEs need to incorporate the triple bottom line principles of sustainable development into their innovation.

There were several studies related to sustainable innovation. Some of them could identify the trigger factors of sustainable innovation, either internal or external factors, while other studies analyzed barriers encountered in the implementation of sustainable innovation. However, there have been no studies yet about sustainable innovation among SMEs in Indonesia. For that reason a research was conducted to analyze the implementation of sustainable innovation in SMEs, particularly in Indonesia, with the objectives as follows: (1) To get an understanding how SMEs in Indonesia incorporate sustainability principles when conducting innovation, (2) To recognize the internal and external factors which can drive SMEs in Indonesia to accomplish sustainable innovation, and (3) To identify the obstacles faced by SMEs in Indonesia in implementing sustainable innovation. To get a deeper understanding the research was limited to SMEs food processing in Surabaya based on the consideration that food processing SMEs based on agro product is one of prioritized industry in East Java (Tempo, 2012). Moreover, currently the food and beverage industry is dominated by micro, small and medium enterprises almost 70 percent.

2 THEORETICAL BACKGROUNDS

Innovation is something new, create something new through the process of learning or knowledge (Smith, 2005). Madrid-Guijarro, Garcia and Auken (2009) stated that innovation is widely recognized as a key factor in the competitiveness of nations and companies. In the other hand, while running innovation, the company should not only prioritize profit, but also consider the welfare of society, and think about the impact of innovation on the environment. This is consistent with the idea that the use of natural resources at present will not sacrifice the need of future generations, which is termed as sustainable development (Wheeler & Elkington, 2001). Thus the company is expected to deliver sustainable innovation that consist of the development of new products, processes, services and technologies that contribute to the development and well-being with regard to natural resources and regenerative capacity (Tello, 2008). Furthermore, sustainable innovation can be defined as innovation activities that contribute to the sustainable development that is beneficial in terms of economic, ecological, and social (Boersema & Bertels, 2000).

There is a combination of internal and external triggering factors that affect the company's commitment to run sustainable innovation. Some studies identified internal trigger factors, i.e. the pressure from stakeholders, the organization identity, the management perspective, and the corporate social responsibility. Other studies stated external trigger factors, such as the consumer demand, the government regulation, social activities, and technological developments. (Yoon & Tello, 2009; Natarajan, 2011). Other researches could identify obstacles encountered in the implementation of sustainable innovation that can be classified to internal and external obstacles. Internal obstacles can be the age of the firm, the firm size, the organizational structure, the bureaucracy, the conservative organization, the age of the employee, and the difficulties of mobility from the top management to accomplish innovation, whereas external barriers are conservatism and market volatility, size and situation of the business sector, global crisis, difficulties implementing new products, higher taxation, difficulty developing new products and expansion into new markets, lack of financial support, minimal institutional support and inadequate disclosure and access to information, credit policies, high bureaucracy, and its dependence on technology (Hadjimanolis, 1999; Madrid-Guijarro *et al.*, 2009; Cordeiro, 2012).

3 RESEARCH METHODOLOGIES

This research can be categorized as an exploratory research because the purpose is to identify the factors that trigger companies to run sustainable innovation and the barriers faced by them in implementing sustainable innovation. Research used two types of data, namely primary data and secondary data. Primary data were obtained directly from observation, interviews with the business owners and by distributing questionnaires to the owners. Sampling was carried out with non probability sampling, especially convenience sampling. Due to limited time and resources, the research was limited only on SMEs in Surabaya that could represent SMEs in Indonesia. There were 100 SMEs food processing in Surabaya as respondents that covered five (5) areas/regions, i.e. western, eastern, northern, southern, and center of Surabaya. The chosen sample was SMEs that already have a permanent location (not a peddler) and own a specific brand of their product. Secondary data were obtained indirectly from related parties or internet.

The research was started with a preliminary survey on twenty (20) SMEs in which respondents gave answers for several open questions. Then the result of preliminary survey was used as a guidance to design a questionnaire with closed questions (multiple choices) divided into three parts: (1) Part I related to the characteristics of company, such as scale, age, type of product, capacity, and location; (2) Part II associated with the innovation; (3) Part III linked to sustainability. In addition to result of preliminary survey, the questions for part 2 and 3 in questionnaire were referred to research of *Network for Business Sustainability* (Adams et. al., 2012).

4 RESULTS AND ANALYSIS

Data processing was conducted with SPSS to get the description analysis and the cross tabulation analysis to determine differences among groups of respondents' profiles with explanation for each part as follows.

4.1 Profile of Respondents

The summarized answers of questionnaire part 1 can be seen in Table 1. Respondents give one answer for questions number 1-5 and could give more than one answer for questions number 6-7. Based on the information on the Table 1 can be identified some characteristics of respondents as follows:

- Location: most respondents have a location in South Surabaya (52%) and East Surabaya (26%).
- Age of business: the majority of respondents run their business 6-10 years (38%), although some of them are new, 0-5 years (28%).
- Production system: most respondents carry out make to stock (39%) and combination (37%). Combination means respondents do not only run mass production but also job order.
- Product variety: the majority of respondents have less than 5 products (36%) and some of them have more than 15 products (26%).
- Employee number: more than half respondents (51%) have 1-4 employees, then 5-19 employees (33%). It can be as consideration to define whether they are micro, small, or medium enterprise: a small enterprise is a business entity which has 5-19 employees, and a medium enterprise is a business entity which has 20-99 employees (Badan Pusat Statistik), while a micro enterprise has less than 4 employees (Suryana, 2003). It means that the respondents can be classified into micro enterprise (51%), then small enterprise (33%), and the rest is medium enterprise (16%).
- Age of employee: the majority of respondents are 21-40 years old (93%).
- Education level of employee: most employee graduated from junior high school (76%), followed by senior high school (42.1%).

Table 1. Profile of Respondents

No	Variable	Answer	Number	Percentage (%)
1	Location	North Surabaya	14	14
		East Surabaya	26	26
		South Surabaya	52	52
		Center Surabaya	7	7
		West Surabaya	1	1
2	Age of business	0-5 years	28	28
		6-10 years	38	38
		11-15 years	13	13
		16-20 years	6	6
		> 20 years	15	15
3	Production system	job order	24	24
		<i>make to stock</i>	39	39
		combination	37	37
4	Product variety	< 5	36	36
		6-10	21	21
		11-15	17	17
		> 15	26	26
5	Employee number	1-4	51	51
		5-19	33	33
		20-49	14	14
		50-99	2	2
6	Age of employee	< 20 years	12	10.8
		21-40 years	93	83.8
		> 40 years	6	5.4
7	Education level of employee	Junior high school	76	54.3
		Senior high school	59	42.1
		Diplome/Bachelor	5	3.5

4.2 Innovation

There were ten (10) variables related to innovation in Part II of questionnaire which the answers are presented in Table 2. Some questions have yes no answers, while other questions have multiple answers and the respondents should choose only one answer. Respondents can also choose more than one answer for several questions. From the information on the Table 2 can be analyzed some variables of innovation as follows:

- Reason for innovation: more than half respondents do innovation to maintain their product favored (51.5%), quality improvement (18.4%), and product uniqueness (16%).
- Innovation idea: the majority of ideas come from business owner (70.1%). It showed that the business owner has a control of innovation on their business.
- Product innovation: most innovation is conducted to create a new product (40.5%) and new flavor of existing product (37.2%).
- Process innovation: the majority of process innovation relates to layout arrangement (45.7%) and raw material preparation (38.7%).
- Impact to product quality: most respondents said that innovation gives an impact to product quality (98%).
- Impact to product sales: almost all respondents (98%) claimed that innovation has an impact to product sales.
- Barrier of innovation: more than a quarter of respondents (26.6%) said they have no barrier of innovation and other respondents said they have human constraint to do it (21.8%).
- Patent/license: most respondents (81%) did not have patent/license yet.
- Reason of not patent: most reason is because they did not know the use of it (38.5%).
- Certificate: most respondents (89%) did not have certificate yet.

Table 2. Innovation

No.	Variable	Answer	Number	Percentage (%)
1.	Reason for innovation	quality improvement	30	18.4
		product uniqueness	26	16
		product remains favored	84	51.5
		cost saving	14	8.6
		competitive advantage	9	5.5
2.	Innovation idea	business owner	94	70.1
		supplier	0	0
		competitor	10	7.5
		employee	6	4.5
		customer	24	17.9
3.	Product innovation	new product	49	40.5
		existing product, new flavour	45	37.2
		existing product, new packaging	16	13.2
		others	11	9.1
4.	Process inovation	raw material preparation	67	38.7
		cooking process	11	6.4
		layout arrangement	79	45.7
		selling process	14	8.1
		others	2	1.2
5.	Impact to product quality	yes	98	98
		no	2	2
6.	Impact to product sales	yes	98	98
		no	2	2
7.	Barrier of innovation	not knowing the procedure	10	8.1
		money restriction	16	12.9
		human constraint	27	21.8
		no time	16	12.9
		not obligatory	22	17.7
		none	33	26.6
8.	Patent/license	yes	19	19
		no	81	81
9.	Reason of not patent	not knowing the procedure	20	19.2
		money problem	11	10.6
		not necessary	16	15.4
		no human resource	12	11.5
		not knowing the use	40	38.5
		others	5	4.8
10.	Certificate	yes	11	11
		no	89	89

4.3 Sustainability

Related to sustainability there are fifteen (15) variables in Part III of questionnaire which covered three aspects of *triple bottom line*, i.e. economic, people, and environment. The result of questionnaires can be seen in Table 3 with the explanation of the answers of Part III as follows:

- Consideration for innovation: most respondents prioritize profit (24.7%) and benefit for consumers (20.6%).
- Knowing the hygienic food production: almost all respondents (91%) said that they know the hygienic food production.
- Packaging: the majority of respondents use plastic (44%) and paper (37.1%) as packaging for their products. It can be understood because plastic and paper are cheap and flexible to be used for food packaging. In Indonesia, according to domestic waste statistical data of Indonesia, plastic waste was in the second ranking with 5.4 million tons per year or 14 percent of total waste production. Paper waste was in the third place by the number of 3.6 million tons per year or 9 percent of the total amount of waste production (InSWA, 2013).

- Knowing recycled packaging: more than three quarters of respondents (76%) said that they do not know about recycled packaging. It is unfortunate because plastic is a material that is extremely damaging to the environment and it took thousands of years to become unraveled (Berita Surabaya, 2014).
- Garbage separation: almost all respondents (94%) stated that they do not separate their garbage. It means they combine all garbage in one place.
- Energy source: most respondents use LPG to meet their energy needs (87.7%).
- Employee training: the majority of respondents give training to their employee (82%).
- Inhouse and outside training: most respondents perform inhouse training for their employee (82%), but only little respondents provide outside training (17%).
- Wearing gloves, masker, and head cover when production: the majority of respondents do not wear gloves when production (68%), do not use masker when production (84%), and also do not put on head cover when production (84%).
- Sponsorship: the majority of respondents do not participate on sponsorship (78%). It means that they are not active in outside activities.
- External activities/meeting: more than half of respondents never attend external activities/meeting (57%).
- Cooperation with other parties: almost half of respondents said they hold cooperation with other parties (43%) and most of them is working with suppliers/vendors.

Table 3. Sustainability

No.	Variable	Answer	Number	Percentage (%)
1.	Consideration for innovation	profit	42	24.7
		benefit for consumers	35	20.6
		impact to environment	10	5.9
		benefit for society	11	6.5
		business sustainability	72	42.4
2.	Knowing the hygienic food production	yes	91	91
		no	9	9
3.	Packaging	paper	59	37.1
		plastic	70	44
		leaf	4	2.5
		stiroform	22	13.8
		can	1	0.6
		others	3	1.9
4.	Knowing recycled packaging	yes	24	24
		no	76	76
5.	Garbage separation	yes	6	6
		no	94	94
6.	Energy source	wood	2	1.9
		LPG	93	87.7
		electricity	10	9.4
		kerosene	1	0.9
7.	Employee training	yes	82	82
		no	18	18
8.	Inhouse training	yes	81	81
		no	19	19
9.	Outside training	yes	17	17
		no	83	83
10.	Wearing gloves when production	yes	32	32
		no	68	68
11.	Wearing masker when production	yes	16	16
		no	84	84
12.	Wearing head cover when production	yes	16	16
		no	84	84
13.	Sponsorship	yes	22	22
		no	78	78

Table 3. Sustainability (continued)

No.	Variable	Answer	Number	Percentage (%)
14.	External activities/meeting	yes	43	43
		no	57	57
15.	Cooperation with other parties	yes	43	43
		no	57	57

From the data on Table 3 in particular it can be analysed that most respondents do not understand and do not apply sustainability principles when completing innovation. They are still focus on economic aspect, i.e. how they get profit and sustain their business. Besides, there is a little concern for environment and people, either employee or society. Although they are food processing SMEs, they still do not know well about the food safety and the hygienic food production. From the interviews they said that they do not test their product whether it is free from bacterial, artificial sweetener, and preservatives. It can be concluded that there is still small amount of SMEs which apply the principle of sustainability while they innovate.

4.4 Cross Tabulation Analysis

Cross tabulation (crosstab) was carried out to know whether there is relationship between respondents profile and variables of innovation and sustainability. There were two hypotheses for crosstab analysis as follows:

H₀: No relationship between respondents profile and tested variables

H₁: There is a relationship between respondents profile and tested variables

Crosstab analysis will use α of 5%. The decision will be 'reject H₀' if significance value $< \alpha$ (number with bold mark). But, if significance value $> \alpha$, the decision will be 'accept H₀'.

4.4.1 Crosstab Analysis between Respondents Profile and Innovation

The result of crosstab between respondents profile and innovation is presented in Table 4 with some variables that got significance value less than 5%.

Table 4. Crosstab against Innovation

Variable	Reason for innovation	Innovation idea	Product innovation	Process innovation	Barrier of innovation	Patent/license	Not patent	Certificate
Location	0.442	0.777	0.055	0.659	0.281	0.071	0.807	0.110
Age of business	0.462	0.889	0.102	0.712	0.207	0.093	0.342	0.210
Production system	0.000	0.156	0.622	0.000	0.377	0.170	0.04	0.082
Product variety	0.366	0.483	0.000	0.453	0.029	0.680	0.329	0.003
Employee number	0.255	0.015	0.244	0.001	0.092	0.000	0.002	0.007
Age of employee	0.371	0.027	0.104	0.733	0.047	0.073	0.000	0.866
Education level of employee	0.050	0.000	0.045	0.000	0.139	0.005	0.000	0.984

In general those results stated to accept H₀, because many variables get significance value > 0.05 . It means there is no relationship between respondent profile and innovation. However, there are some variables with significance value < 0.05 with summary as follows:

- Reason of innovation versus production system: it can be understood because if respondents run business with job order production system, they have to customize their product as customer's

order. Sometimes the product is new and they have to create it, so that it will stimulate them to do innovation.

- Innovation idea: this variable is influenced by employee number, age and education level of employee. Employee number is as identification of business scale. The more employee number, the bigger the business, which will provide the possibility of sharing ideas between business owner and employee.
- Product innovation versus product variety: the more product variety they have, the more innovation will be created, especially to design or to modify new product.
- Process innovation versus production system, employee number and age of employee: the production system can give an impact to process innovation. One example is when SMEs run a production of ‘make to stock’, they have to arrange their outlet attractively, because they need it to display their products. It will be different from ‘job order’ because usually consumers will come to their production place to pick up the orders and they do not need to provide an outlet.
- Barrier for innovation versus product variety and age of employee: if SMEs already get success with product variety less than 5, they will be reluctance to innovate because they can survive with existing products. They are already in the comfort zone and have lack of enthusiasm to spend more efforts to create a new product.
- Patent/license versus employee number and education level of employee: if there is small number of employee, there is human resource restriction to complete the prerequisites to get patent/license.
- Not patent versus production system, employee number, age and education level of employee: if SMEs run production with job order system, they might not get patent because the order with customers will be based on trust. It differs from make to stock system which the product is sold through retailers, so that SMEs should have a patent/license as a competitive advantage from other similar products.
- Certificate versus product variety and employee number: if SMEs create more product varieties, they will get problem to get certificate (patent/license) because they have to get it per product. The more products they have, the more cost and time they need to get a patent/license.

In general there are only two variables that have no relationship with variables of innovation, i.e. location and age of business. It means that innovation does not correlate to location and does not significantly relate to how long SMEs in business.

4.4.2 Crosstab Analysis between Respondent Profile and Sustainability

The analysis will be divided into two parts: environmental aspect and human aspect. Result of crosstab between respondent profile and environmental aspect is presented in Table 5.

Table 5. *Crosstab* against Environmental Aspect

Variable	Consideration for innovation	Hygienic food processing	Packaging	Recycled packaging	Garbage separation
Location	0.745	0.964	0.123	0.044	0.058
Age of business	0.086	0.050	0.325	0.354	0.738
Production system	0.051	0.109	0.044	0.045	0.053
Product variety	0.304	0.159	0.049	0.398	0.012
Employee number	0.765	0.832	0.369	0.011	0.007
Age of employee	0.000	0.761	0.033	0.001	0.577
Education level of employee	0.152	0.977	0.032	0.005	0.001

Overall there is no relationship between location and environmental variables. However, some variables *significant value* <5% that means ‘reject H_0 ’ with explanation as follows:

- Reason of innovation versus age of employee: the older age of employee, the more experiences they have that can stimulate them to perform innovation.

- Packaging versus production system, product variety, age and education level of employee: SMEs that run their business with 'make to stock' system usually have more consideration about packaging because the product will be sold through retailers and the attractive packaging is important to grab the attention from consumers.
- Recycled packaging versus location, production system, employee number, age and education level of employee: generally the longer SMEs run their business, the more they know about regulation and they try to comply to it, i.e. the allowed packaging material, label, license, etc.

Only one variable, Hygienic food processing, has no relationship with environmental aspect variables. In other words, most respondents know about hygienic food processing regardless of their location, their age, the production system, the scale, the age or the education level of employees.

Result of crosstab between respondent profile and human aspect is presented in Table 6.

Table 6. Crosstab against Human Aspect

Variable	Employee training	Internal training	External training	Gloves	Masker	Head cover	Sponsorship	External activities	Cooperation with other parties
Location	0.540	0.042	0.026	0.096	0.139	0.153	0.054	0.678	0.104
Age of business	0.098	0.170	0.614	0.350	0.576	0.377	0.845	0.530	0.178
Production system	0.004	0.069	0.081	0.041	0.055	0.126	0.007	0.000	0.053
Product variety	0.012	0.020	0.090	0.031	0.164	0.002	0.000	0.245	0.006
Employee number	0.084	0.248	0.607	0.000	0.000	0.000	0.000	0.001	0.001
Age of employee	0.663	0.912	0.644	0.055	0.000	0.003	0.529	0.008	0.045
Education level of employee	0.761	0.993	0.015	0.004	0.071	0.032	0.031	0.424	0.552

It can be seen from Table 6 that age of business does not relate to human aspect. But, most variables had *significant value* < 5%, so that the decision is 'reject H₀' or there is a relationship between respondent profile and human aspect. In general business scale measured by employee number has impact on human aspect. The bigger the business scale, the more their concern of regulation compliance, i.e. hygienic food processing, sanitation, employee training, and cooperation with other parties.

Based on results of crosstab analysis entirely, there is no correlation between location and age of business with innovation, no relationship between location and human aspect, and no linkage between age of business and human aspect; whereas other variables, i.e. employee number, age and education level of employee, have differences on innovation, environmental and human aspect.

4.5 Analysis of Trigger Factors of Sustainable Innovation among SMEs

The result from questionnaire can be classified to be some factors that can encourage sustainable innovation among SMEs with the following explanations.

- Internal factors: most innovation is applied to product with major purposes to keep product remains favored (51.5%), quality improvement (18.4%), and product uniqueness (16%). Most innovation ideas come from business owner (70.1%).
- External factors: innovation is carried out to give benefits to consumers. Innovation ideas can be obtained from consumers (17.9%) and competitors (7.5%). Other external trigger factors are

government through the regulation of patents/license in which SMEs should fulfill some prerequisites, such as a specific brand, packaging, label, good processing, location, and cleanliness. That regulation can trigger SMEs to accomplish innovation in order to fulfill those requirements. Moreover, the participation in external activities (79%) and cooperation with other parties (79%) can also inspire innovation because those activities allow them to share and transfer information and knowledge.

Generally this finding is similar to result of research among SMEs in United States that identified the major trigger factors of sustainable innovation, i.e. cost, regulation, and customer demand (Natarajan, 2011). It is also corresponding to research result of Yoon (2009) which stated that external trigger factors are customer demand and government regulation.

4.6 Analysis of Obstacles faced by SMEs in Sustainable Innovation Implementation

Through the description analysis it can identify some problems faced by SMEs to implement sustainable innovation as follows:

- Internal obstacles: some respondents said that they have human resource inadequacy to carry out innovation (21.8%), time limitation (12.9%), and money constraint (12.9%). It can be understood because most respondents are micro and small businesses that usually the business owner does some functions together, so that they do not have spare time to do innovation. Furthermore, usually micro and small businesses do not allocate specific budget for innovation, because they manage the profit they get for business operation activities. Another internal obstacle is the reluctance of performing innovation which 17.7% respondents said that there is no compulsory to perform innovation.
- External obstacles: the problems faced by SMEs are not knowing or lack of information about patent/license, not knowing the benefit (38.5%), not knowing the procedure (19.2%), and not necessary (15.4%). Besides, they do not understand also about the recycled packaging (76%) and do not separate the garbage (94%). Lack of government support is also as external obstacles related to the procedure to get patent/license, lack of socialization about the food safety and hygienic food production. SMEs often do not take care of patent/ license because there is a reluctance to complete the requirements and follow the rules, as well as the arrangement of patent/license requires considerable time and enough funds.

These findings strengthen the result of research among SMEs in Cyprus that identified some internal obstacles, such as lack of time and money constraint, while government policy was as external constraint (Hadjimanolis, 1999). These findings can be also in accordance with result of research among SMEs in Spanyol that stated that internal obstacles were money constraint, lack of human resource, while external obstacles were business environment changes, lack of information, and lack of support from government (Madrid-Guijarro, Garcia and Auken, 2009). Cordeiro (2012) who conducted research among SMEs in Portugis also defined that internal obstacles of sustainability implementation were money constraint, the reluctance of the organization and the unwillingness of human resource to do changes.

5 SUGGESTIONS

Based on the findings of this research some suggestions can be given to SMEs food processing in Surabaya. The biggest barriers of accomplishing innovation are lack of human resource (72%) and no compulsory to do innovation (22%). Other barriers are not knowing the benefit of patent/license (38.5%) and not knowing the procedure (19.2%). Those findings are similar to the findings of Irjayantia (2012) who stated that most problems faced by SMEs were money access, managerial skills, and economic constraints. Therefore it is important to inform SMEs about the food safety, so that they can apply it to the product sold to customers. Besides, there is about 10.4% respondents

who has money restriction to obtain patent/license, therefore it is also necessary to facilitate SMEs to get patent/license easily as the guarantee of their product.

In addition, SMEs need trainings about the sorting of waste/garbage and recycled packaging, as well as marketing and simple accounting methods to enhance their skills as competitive advantage. The training and facilitation can be carried out through cooperation and collaboration between government, universities, and related parties. It will be better if the government dedicates more effort in specific action to eliminate the barriers of SMEs, such as safety standards improvement, development programs, good financial regulation, and other supported programs (Irjayantia, 2012). It is expected that SMEs are increasingly stimulated to innovate and when performing innovation they do not just focus on the business, but also their business impact on humans and the environment. Thus, SMEs have a competitive advantage and will be able to face competition not only from domestic products but also abroad products, especially facing the Asean Economic Community in 2015.

6 CONCLUSIONS

From the research conducted on 100 SMEs food processing in Surabaya can be obtained the conclusions as follows: most respondents are located in South Surabaya (52%) and East Surabaya (26%). The majority of respondents runs their business 6-10 years (38%) and 0-5 years (28%). Their production system is 'make to stock' (39%) and combination (37%). They have product variety less than 5 (36%). Based on employee number, the majority is micro businesses (51%), then micro businesses (33%). Age of employee is 21-40 years old (93%). Education level of employee is junior high school (76%). It can be identified internal trigger factors of sustainable innovation among SMEs, i.e product (product remains favored, quality improvement, and product uniqueness), profit, business owner, and competitive advantage; while external trigger factors are consumers, competitors, government, and other parties. Several internal obstacles of SMEs to carry out sustainable innovation are lack of human resource, time and money restriction, and the reluctance to perform innovation; whereas external obstacles are lack of information and lack of government support.

There are some recommendations for further research, such as using the same criterion for sample to get a comparison based on the categories (i.e. fast food, packaged food, and snack), more variables involved, especially referred to sustainability, and using Likert scale to measure the result with quantitative (inferential statistics) methods.

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