

Inclusive business model in tapioca starch industry in Lake Toba area: a case study

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Abstract. The notion of inclusive business calls for additional focus and innovation in the way companies do business which seeks to contribute to poverty alleviation by including Bottom of the Pyramids (BoP) communities within its value chain while not losing sight of the ultimate goal of business. Lake Toba Area has potentials in providing chances for doing businesses. On the other hand, the growth of market size is rather slow and demographically still dominated by BoP. This is a case study which seeks to investigate to what extent the Inclusive Business Model (IBM) is adopted in the strategic planning and applied in the operational management of companies that operate in Lake Toba Area. The study was conducted in qualitative basis. The observation was conducted by gathering data and information through a series of interviews with the top management and desk study of the business plan in a tapioca starch industry in Toba Samosir Regency. The collected data and information were then analyzed qualitatively by comparing them with criteria and parameters of IBM suggested in a vast body of literature. The reference by which the IBM is referred in this study is a series of criteria which is synthesized from a literature review on a vast body of literature about IBM. From data analysis, it is evident that IBM has been incorporated in the strategic plan and applied in the operational activities of the object of this study. However, we also found some rooms for improvement such as expanding the involvement of BoP in their value chain as consumers, by which some innovation in the product diversification is required.

1. Introduction

Inclusive Business Model (IBM) is becoming a trend. The growing enthusiasm for the IBM is adopted by philanthropic organizations, by the newly emerging impact investment industry, and by donors and other organizations, is helping to enhance their visibility and also prompting the creation of new models [1]. That is why IBM becomes an interesting topic to research. Promoting inclusive business is a relatively new, but rapidly growing field of development cooperation and being responded seriously even by the United Nations (UN). The Growing Inclusive Markets Initiative responds to a need for better understanding of how the private sector can contribute to human development and to the Millennium Development Goals [2], where human development is everybody's concern.

Lake Toba region is a natural ecosystem that provides strategic functions of the basic human needs and economic development. Recently, the Government of Indonesia is making every effort to accelerate the development of Lake Toba region into a main tourist destination in the country. Even though tourism has traditionally been considered the main driver for social and economic development for the region, the development of Lake Toba region has is also marked by the rise of industry sectors,



particularly the agro-processing industry. Tapioca industry is one of the agricultural processing industries sector located in the area of Lake Toba. The integration of IBM applied in strategic decisions and operational practices in tapioca industry in Lake Toba area is essential considering demographical condition, in which the poor who lives at the base of the global income pyramid (the so-called 'base of the pyramid' or BoP) in the region are still dominant.

Embarking from this reality, the authors consider it important to conduct an assessment on the application of the IBM in the tapioca starch production system in Lake Toba region. The objective of this study is to investigate to what extent the IBM is adopted in the strategic management of the company and to disclose various aspects that have the opportunity for system improvement. This study is a part of a larger agenda in the research roadmap of the Faculty of Industrial Technology at Institut Teknologi Del, which contributes in policy design and development of Lake Toba Area.

2. Methodology

This study begins with literature review about IBM through several studies undertaken by previous researchers and organizations. This literature review is performed to find the parameter or criteria of IBM by revisiting theories, backgrounds, and reports about the practices of IBM in the companies worldwide. After the literature review, a series of data collection and interview was then conducted in a tapioca starch industry located in Toba Samosir Regency (hereafter "the company"). This data collection is performed in order to get the data needed in this study. The data is gathered from the key personnel or the executives in the company in question. After gathering data about how the company operates and the theoretical basis of IBM, author then continue to compare the field data and theory. The comparison will be shown in the form of table. From the table, author states about the conformity of the practical finding with the theory.

Finally, to complete the objective of this study, author then analyze the conformity. It means that the comparison table will be analyzed deeper than merely about conformity. The comparison is discussed to find to what extent the IBM is adopted in the strategic management of the company.

3. Inclusive Business Model Revisited

In this section, an excerpt of literature review of a vast body of literature about Inclusive Business Model (IBM) is presented. IBM is a type of business model that includes the poor on the demand side as clients/ customers and on the supply side as employees, producers and business owners at various points in the value chain [2]. In IBM, the poor is the stakeholder of the business. The poor are those who lives at the base of the global income pyramid (the so-called 'base of the pyramid' or BoP), lacking the access to markets providing essential goods and services [1]. There are many reason and background to the recent unlucky condition of some areas and one of them is the failure of public authorities. Inclusive Business models integrate the poor in situations where markets or public authorities have failed as:

1. They introduce innovation to business models, processes, products and services, such that they become more affordable and/or better tailored to the needs of the poor.
2. They undertake targeted measures to integrate the BoP, e.g. providing training, extending credit to customers, suppliers and sales agents, etc.

To cope with such unlucky conditions, businesses have some roles in promoting IBM which reflects the characteristics of IBM. Author also has stated that doing business in the inclusive way is taking the attention of world organizations. For that, FAO also has its own criteria of IBM [3]. After reviewing relevant literature about IBM, the author decided to characterize the IBM based on Rösler et al. [1] and FAO [3] as a benchmark to conduct the assessment of the object of this case study (Table 1).

Table 1. Criteria of Inclusive Business Model

No.	Rösler et al. (1)	FAO (3)
1.	Create capacities and space for innovation & research	Provides a living wage for vulnerable group
2.	Deepen community engagement	Uses flexible trading arrangements
3.	Create awareness among clients and other stakeholders	Supports farmers and small enterprises to establish a stronger negotiation position
4.	Build capacities, e.g. training of suppliers	Builds on the skills and expertise of existing market players
5.	Engage in policy dialogue	Is scalable in the medium-term
6.	Organize end-to-end solutions	Allows for diversified income streams
7.	Improve own management skills (as Small Medium Enterprise)	
8.	Commit financing, time and patience to carry IB model to break-even	

In addition to the criteria, Kubzansky et al. [4] argues there are some steps for inclusive enterprise to deliver their social impact at scale as follow:

1. Innovation and grow
To scale the business, the enterprise need time, investment, and innovation, moreover, when the BoP is the only supplier and customer without any subsidiary entity.
2. Replicate and disseminate
Creating more enterprise must be seen from many perspectives. One may see it from the existing business' view as the new entrants copy their model. Other may see it from investor's view which wants to invest to new companies with almost similar successful business model.
3. Leverage and improve
Bringing updates to other sector which are already at scale, this step is asking for improvement. The improvement needed in this step is about formalizing the informal and giving legalization or certification. After that, more investor may come because the enterprise has become more established and acknowledgeable.

Later, these steps will also be discussed for the conformity analysis. The previous interviews from London and Hart [5] reflects the presence of biases associated with top-of-the-pyramid market situation and customer condition may result in a wrong treatment in the base of the pyramid environment. Agribusiness and biotechnology companies can work with small farmer to improve rural productivity [6]. However, the cooperation between agro-processing and BoP may face these two problems:

1. The dispersion laces of small-scale producer's locations which can affect the transportation cost and lead time
2. How appropriate is the supply provided by small-scale producer?

Two big challenges are evident when seeking to apply inclusive models to developing country economies dominated by small scale producers, either for domestic retailing and processing, or for exporting. The first is organizing and upgrading supply from a dispersed producer base. The second is traceability and quality assurance. Through attention to the 'partner network' in the business model framework, the value proposition of modern agro-processing business and cost structure can be maintained or even strengthened by building in inclusion of small-scale producers and suppliers.

4. Data and Analysis

A series of structured interviews have been conducted in the period between February and May 2017 in a tapioca starch industry in Toba Samosir Regency. The data are then compared to the theoretical criteria of IBM. Table 1 compares the roles of business in promoting IBM according to Rösler et al.

[1] and the practices of the company. Table 2 compares the criteria for IBM from FAO and practice in the company.

Table 2. Comparison between Rösler's IBM criteria and practices in the company

No.	Parameter	Practices in the company	Conformity
1	Create capacities and space for innovation & research	The company is open for any educational institution which want to do research or to study about the company in its factory in Lake Toba Area. However, almost all of these researchers cannot be classified as BoP.	Conforming
2	Deepen community engagement	The advent of this company initiated and promoted the cultivation of cassava in the neighborhoods (Lake Toba area), as the community saw the opportunity to become suppliers. Most of the community engaged in cassava planting is considered BoP.	Conforming
3	Create awareness among clients and other stakeholders	To strengthen their supply independency and certainty, the company also has their own field. Basically, the field is not owned by the company, but The company has their own worker and machines to do work on the field. Until 2016, the company still does not own those fields. The field is owned by local people, but was given as rent or contract to the company. The reasons why those fields were given to the company are not only because nobody was working on the field, but also because those fields are not easy enough to reach or to use. The company has made local people (probably as BoP) aware about the opportunity of the factory presence.	Conforming
4	Build capacities, e.g. training of suppliers	The company gives some support in the shape of machinery for local farmer. For that, the company conducts small training about the use of machine.	Conforming
5	Engage in policy dialogue	The company work hard to engage in free market policy and local enterprise protection. Since 2016, the company has felt the competition effect of the free trade in between ASEAN countries. The company recognized that sooner or later, local farmer will then be affected too as their harvesting is not received by the factory.	Conforming
6	Organize end-to-end solutions	There were times when some of the suppliers came in the wrong time, when the factory cannot receive any more cassava even for the next 3 days for certain reasons. It was a dilemma for the supplier who has come from far away. It is almost impossible for them to go home and keep their cassava as bad as if they stay far away from home for days inside of truck. The company provided some solutions to this problem by publishing leaflets and spread posters containing information about their forecasted activity and their contact person information. This solution is effective and also a win-win solution for both the company and local farmer.	Conforming
7	Improve own management skills (as SME)	The company is not classified as SME.	Non-conforming

No.	Parameter	Practices in the company	Conformity
8	Commit financing, time and patience to carry IB model to break-even	According to the company's financial statement, even until 2016 the company has not earned significant profit. However, since the founders commits with their mission in creating opportunities for local farmers, the operation still goes on by depending on the supports from its holding company. However, the managements are optimistic that it still can achieve break-even.	Conforming

From Table 2, it is evident that in most of the criteria, the company conforms to the IBM criteria. The company is, by design, committed to engage local people into their. They believe that when the local farmer's income raises, they can educate their children well and have a better health for their life. There is possibility that those who were in BoP will move up from BoP status. Even if they are not, at least, their condition will be better. This is how the business plan of the company applies IBM in a way to give local people job and work for their unfarmed fields. The company does not give subsidies or direct financing support but it gives help or funding support through receiving funding proposal. An influencing factor that enables the company to survive is the support from its holding company. Otherwise, the company would have been closed since some years ago.

Table 3. Comparison between FAO's IBM criteria and the practices in the company

No.	Criteria	Practices in the company	Conformity
1	Provides a living wage for vulnerable group	The worker of the company came from local society. As the local farmers are still assumed as BoP by the company, it makes the worker of the company who came from farmer family are BoP too. The culture which they belief makes them vulnerable to income instability, specially the party or celebration traditions which can be held for days. After they work for the company, those workers come into an arranged and strictly scheduled industrial environment. This condition provides them a better and stable income.	Conforming
2	Uses flexible trading arrangements	The company has deployed their preventive solutions to local farmers so that local farmer will not bring their cassava when the factory closes their supply door. As an industry, it shall strict to this way. But, when it comes to a condition that a local farmer come from far away to sell their cassava when the factory has no demand, the company will still manage to receive the cassava. Of course, the factory will check carefully to ensure that the farmer honestly come from far away. Even though this way is flexible, the company will be careful to that farmer and inform that farmer later to avoid the similar condition happen in the future.	Conforming
3	Supports farmers and small enterprises to establish a stronger negotiation position	As Indonesia enter the free market of ASEAN, government's protection and support on local product is a concern to many companies, including the company. The company has promoted local farmers to use their fields for cassava. This growing number of local cassava farmer may go down together with the factory if there is no place for the company's product in the market. Because The company itself is still not profitable, the company cannot give intense training, skill development, or massive machinery. Both the company and local farmer have	Conforming

No.	Criteria	Practices in the company	Conformity
		known this problem.	
4	Builds on the skills and expertise of existing market players	The company's factory in Lake Toba Area was established by the same people who have experience in other area like Lampung, and other part of Sumatra Island. So, what they wanted to do is to include and persuade people of Lake Toba Area and around to get into their business. The collaboration between local people and the company is clear and transparent. They also risk the same thing if the company does not gain profit and is lost or failed in the free market era.	Conforming
5	Is scalable in the medium-term	The company receives not only massive tonnage of cassava from big players. It also receives medium or small amount of cassava from little player with small field.	Conforming
6	Allows for diversified income streams	The company has ever shipped their product to Surabaya, Java. Thanks to good transportation via sea. The company is used to search for market or buyer far away from home because in Lake Toba Area itself, there is no large-scale industry with tapioca flour as the raw material. So far, the company is used to send their product in its province, North Sumatera, but in the other regency.	Conforming

From Table 3, it is evident that the company is full of people from BoP from the supplier, manufacturing, to customer. It gives many things to do for local people. Its presence motivates local people with unfarmed fields to let theirs being worked by the company. This company also gives chance for small farmer to sell their outputs. In its operation, the company uses skilled and experienced people from all over Sumatra Island as the supervisor or head of departments. Neither local people who are neither scholar nor certified skilled people will be the worker who works under the lead of those who are the heads of departments. Actually, the company spread the job vacancy even in the internet. It also receives candidate from everywhere. Of course, when it comes to two candidates with similar performance, the company will choose the local one.

Analyzing Table 2, it can be concluded that if the company did not exist at its time, the condition will be worse. Even if people in BoP is still in BoP financially, but the condition of education and income stability has been better. One may conclude that the company adopts IBM in spite of its exclusivity in searching for experienced and skilled managers for head of department positions.

As stated clearly in its business plan, the company built to improve the living of people around Lake Toba area. Those people in Lake Toba area are lack of possibility to get higher education, have low income, and around seven kilometers away from the main market to get everything they need. The poor who lives at the base of the global income pyramid (the so-called 'base of the pyramid' or BoP) is lacking access to markets providing essential goods and services.

People living in poverty are unable to sell their product at the right time, in the quality, or to right time. That's why the company, in its operation, gives a lot of information about the market, the price, and the availability to receive cassava demand at a time. The reason why the inclusivity of the company does not include BoP as its main customer is mainly because of the small market size in the Toba Samosir regency, the area where they are operating.

In order to protect and to promote the adoption of IBM by other company, the government side should show their support, especially in the initial years (start-up). Policy makers can support inclusive business development by establishing an innovation system that facilitates exchange and cooperation between academia, the private sector and responsible government actors. Better business and industry environment will exist if the output of the company is used by other kinds of manufacturing located not too far away, in the same regency.

5. Conclusion

This study provide evident on whether and how the company has applied IBM, not only in its business plan, but also further into its practices and operational. Despite most of the practice shows the conformity to the IBM's parameters, the company is still lacking in building new enterprises which also applies IBM as SME. As the company has strong patience for its break-even, and maintaining close relationship with BoP as supplier, we conclude that the company is applying IBM in its operational as well as in its strategic management. The main recommendation of this study is that community and government, in rural area where farming is the main activity, must support companies that adopt IBM. This study also recommends that the government should protect and support companies using IBM like the company.

References

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