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Putting Risk Considerations in Designing Business Strategy

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Abstract: There are several models on designing a company's strategy. Some strategy design models focus on the contents while others focus on the process. However, none of them consider risks as part of the strategy formulation while risks are important ingredients on decision making at strategic level as well as operational level. Furthermore, social and environment become two main, emerging issues that potentially raise risks and may put a company into trouble. For that reason this study attempts to propose a strategy design model that incorporates risks into the strategy formulation process. Social and environmental issues become integral part of the strategy formulation process. This proposed model attempts to combine both content and process approaches on strategy design. By putting risks at this stage, the company may anticipate major changing in the external and internal environments, mainly the shift in strategic group in which the company competes and as a result, the company may be able to build sustainable competitive advantages.

Key words: Strategy design, sustainability, integrated risk management, economic, social and environment objectives, strategic group

INTRODUCTION

There are least two important pillars in corporate governance. The first pillar is strategy and the second pillar is risk management. The requirements to implementing and enhancing corporate governance force companies to provide good, transparent planning, documents and execution of not only strategy but also risk management practices. A well designed strategy and its execution is firstly the indication of the quality of its governance. The company is expected not only to achieve the standard level of corporate governance but also to reach the strong governance in order to gain its competitive advantages and to satisfy its main stakeholders, either external stakeholders such as consumers or internal stakeholders such as shareholders and employees.

By applying those pillars, the board of directors or BOD is in the right track to achieve company's objectives with high confidence. The objectives supported by strong corporate governance may be the combinations of economic and social objectives and individual and community objectives as argued by Cadbury. He also put the stress on the role of corporate governance on the effort to effectively employs the resources that belong to the company and at the same time to demand the accountability of the stewardship on the use of the resources for the sake of company's personnel or individual, company itself and society.

Research on linking risk into strategy design is still very poor. There are some emerging research areas on risk management. The first and the most popular area is related to the development of risk management itself from conventional risk management into integrated risk management model. The research on this area includes risk management framework development, risk maturity models, risk cultures, risk assessment, etc. (Hillson,1997). In terms of strategic issues, some researchers are aware that the risk consideration at strategic level has to contribute to company's value. Dionne proposes the use of risk management in a company not merely to reduce risk level but also to contribute to firm value maximization. Further more he also suggests that as part of corporate governance, risk management must be defined by BOD. However, history proves that risk management is still not part of strategy design as the concern of BOD.

Miller (1992) criticizes the lack of the consideration of risks at strategy design. He suggests that strategic management is lack of definition of risk, either upside or downside risks.

Risks and uncertainties of environment that come from exogenous shocks or unforeseen behavioral choices, lead to the unpredictability of performance such as profit and share prices. For that reason, he proposes the use of integrated risk management or IRM as the right approach to be part of strategy design not silo-approach of risk management. However, he does not provide guidance on how to link strategy design and risks at strategy design stage.

Another popular area of research that relates risk and strategy is at the strategy execution stage. After being designed, management attempts to assess risks and put

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some plans and efforts to respond to the risks in order to reduce, avoid, transfer to treat with other mechanisms appropriate to the company.

Many research papers explore the use of risks and strategy execution (Bowman, 1980; Singh, 1986; Goyal and Agrawal; 2010, Sheehan; 2010). Sheehan (2010) for example, propose an approach of the use of risk management at the strategy execution stage in order to make the company ready to grasp opportunities and at the same time, to avoid negative impact of unexpected events (upside and downside risks). He proposes 4 steps in risk management at strategic level, i.e., strategy mapping, key organizational risk assessment, the design of management control system and the on-going monitoring activities. Desgagne (2004) conducts the research at execution stage as the response to adverse event such as Bhopal accident. Besides providing responses to such accidents, a company is also required to treat any possible risk events similar to Bhopal accident to be treat as risks and to design risk responses to the environmental issues.

The involvement of risk consideration at strategy design stage is expected to increase the confidence level of organizational performance. Cadbury proposes the balance of performance, i.e., the balance between economic and social performances and between company as individual and community performances. These are achieved by efficiently employing company's resources and keeping the accountability on the resources. In other words, the existence of a company is required to fulfill the interest of individuals involved, the company itself and the community at large. This may happen if the organization also provides a good incentive mechanism and appropriate regulation.

The aforementioned argument suggests that designing strategy is a totally separate activity from managing risks, at least up to now. Those two activities have been blended at functional level, mainly at financial activities and especially at portfolio investment activity (Froot *et al*., 1993). At the company level, however, this kind of approach is still not common and lack of model proposed by researchers as well by practitioners. David and Wheelen and Hunger provide the explanation on risks in their book on strategic management. However, the explanation on risk issues seems to be an additional chapter that is not clearly linked to the strategy design process.

Based on the above issues, the question to be answered in this research paper is how does strategy design and risk considerations are combined into the strategy design stage?

THE REVIEW OF CURRENT STRATEGY AND RISK APPROACHES

Singh emphasizes the importance of risk taking consideration in decision making. He studies the relation between performance and risk taking. He finds that a company with poor performance tends to take higher risk compared to another company with better performance. This finding is in accordance with the finding by Bowman (1980). Whetten finds that the risks become the trigger for management to develop innovation while Singh emphasizes the relation between risk and strategic decisions on acquisition, new investment and capital funding. Their studies, however, do not provide the guidance on the way management incorporates risk into decision making.

Froot *et al.* (1993) explores the way risks are accommodated into financial decision, especially on portfolio investment. At functional level and especially in financial area, risks have been long employed in the decision process when the management chooses securities for investment, i.e., on buy, hold and sell decisions. In practices, the uses of risk consideration at functional and operational levels become common nowadays. However, these practices are considered as at the execution stage. The reason is that the strategy of the company has been decided before the functional levels of the company translates the strategy or long term plan into divisional or tactical plan. However, the risk involvement in decision making process at functional levels can be adopted and modified into the top level, strategic decision making process, especially on strategy design process.

Risk and conventional strategy design have different orientation. The purpose of putting risks into strategy design is to make sure that the strategy chosen must not bear risks that beyond the organization's risk appetite and tolerance. This helps the organization to avoid adverse surprises and at the same time to make the organization prepared to grasp opportunities. In other words, the organization attempts to avoid both downside and upside risks. The purpose of designing a good strategy is to build organization's competitive advantages through the uniqueness and its uniqueness is valuable to costumers and other stakeholders (Teece *et al*., 1997). By applying integrated risk management or IRM, the possible events that may affect negatively to its competitiveness may be avoided and as a result, the strategic objectives or targets may be achieved with high confidence (Miller, 1992; Das and Teng, 1998 and Berg, 2010).

Organization needs to explore risks at all aspects including macro, industry and company specific levels (Miller, 1992). Risks may be identified and classified on the basis of whether the risks originally come from external or internal sources (Desgagne, 2004; Hernandez and Alvarez, 2013). External or macro-related risks include political, economic, social, technological, environmental legal risks. Among several risks, environmental risks become crucial issues because these affect the sustainability of the organization. Desgagne (2004) proposes the development of strategy in order to tackle environmental issues such as Bophal tragedy. This aspect as a consequence, encourages the company to consider its objectives that not merely focus on economic performances but also social as well as environmental performances and its strategy that consider those three aspects (Salzmann *et al*., 2004; Petrini and Pozzebon, 2010; Galpin and Whittington, 2012; Hansmann *et al*., 2012).

The process of strategy design needs an attention because there are so many strategy deign models available. As mentioned above, Wheelen and Hunger attempt to put risk consideration into strategy formulation. However, they merely put the risk analysis as issues to be considered. They do not clearly suggest the way risks are considered as the part of strategy formulation process. Another important point to be raised is that they also attempt to incorporate two important strategy school of thoughts, i.e., external-driven strategy school of thought and resources-based strategy school of thought.

Porter is one of the prominent scholars who successfully introduce a model of strategy design that has the orientation to the external-driven strategy. This model emphasizes the position of a company in its market within its industry. He defines industry that has five main components, i.e., existing competitors, consumers, substitutes, suppliers new entrants. By understanding its position within the industry map, the company may identify its opportunities to be captured, threats to be overcome most importantly introduced by Porter is its key success factors. These key success factors need to be compared to the company's competitors to evaluate the strengths and weaknesses. Hence, opportunities, threats, strengths weaknesses become the main input for developing strategy alternatives and choosing one of the generic strategies that is appropriate among the three, i.e., cost leadership strategy, differentiation strategy or focus strategy. Porter suggest a company not to mix those generic strategy or otherwise trapped in the muddle. This suggestion, however, receives many comments and critics because of the fact that companies with combined generic strategy are successful.

Mintzberg classifies Porter Model as a positioning school because the strategy is designed on the basis of the company's position in the market and industry. Slater and Olson (2002) argue that his model is based on industry structure. The structure of industry determines what action needs to be done by the company, what positions intend to be achieved by the company in the future to gain better position, bargaining power competitive advantages by avoiding industry pressure generated from the five forces of industry structure. The ability for the company to move to the better position with better competitive advantages results in the better chance to gain profit and sustainability.

The positioning model designed by Porter is one of favorite model by practitioners because of its clarity and simplicity. The factors to be evaluated on every component of industry are clear including their indicators. Porter provides what to be evaluated on every aspect of existing competition, new entrants, substitutes, consumers suppliers. However, defining an industry is not an easy job. In practice, other factors may be potential to be included in the industry structure such as government or regulators and environmental activists. This possibility may trigger (Speed, 1989; Grundy, 2006) to question the validity of industry defined by Porter. Furthermore, the definition of existing competitors may be under question too. The competing companies are grouped into a strategic group. Theoretically, a strategic group consists of companies that closely compete each others. Similar products may be produced by several, even more than ten companies. Those products, however, may not totally compete each others. They may grasp different market segments. Also, a product may combine several functions that are generated across industries. Merging industries tend to happen to those driven by high technology. As a result they never meet in the market battle. Those companies may have different business model and different company sizes. In such a situation, those companies may not be called as competitors. Furthermore, the trend of conglomeration adds another difficult on defining the competitors. As a consequence, many practices on Porter's strategy design approach may be under question.

Porter's Model that is classified into two types of school of thoughts, i.e., planning school and design school of thoughts, becomes a good foundation for developing other strategy design model. Those who employ Porter's Model to develop other strategy design models extend the components by putting other factors, mainly macro components. The definition of macro issues depends on the scope of the competition faced by the company. They may focus on national, international or

global issues. Dalken suggests three important issues that are emerging all around the world, i.e., digitalization, globalization and deregulation.

Teece develops a strategy design almost at the same time with Porter when he develop the above strategy design model. The approach used by Teece, however is on the opposite with the approach used by Porter. Teece develops a strategy design on the ground of capability. This strategy is categorized as a resources-based strategy design. Teece suggests that the strategy has to start with the understanding of resources occupied the company. the resources that are properly employed and managed by the company become competences. The competences that are unique, not easy to be imitated, rare and adding value to the market if properly employed, become capabilities. The company is at the maximum performance if it has the dynamic capabilities, i.e., the ability to change its capabilities in order to respond to the changes in technology, environment, competition market.

The dynamic capabilities are acquired by the company if it has capacity to adjust resources and activities to generate unique competences to respond to the changing environment. If this capacity can be done regularly to every change in environment, the company has dynamic capabilities. The dynamic capabilities have three main strategic characteristics, i.e., usability in relation to the ability to fulfill the needs of the users in order to generate revenues, economic rent or profit; uniqueness for the company to be able to have the power to set the price without the fear the retaliation of competitors difficult to be replicated so that the profit are unlikely to be able to be taken by competitors.

Starting from the understanding of capabilities, Teece proposes three steps of strategy design. The first step is to identify the unique resources acquired and managed by the company these resources become unique capabilities if the company manages properly. Te second step is to identify the market that is appropriate with the capabilities acquired by the company. The appropriateness of the market is evaluated on the economic rent, profit sustainability to serve the market. The third step is to evaluate the best uses of resources or capabilities effectively. These three steps proposed by Teece is on the opposite of the steps employed by Porter that starts from market identification first.

There are many other strategy design models. Mintzberg categorizes strategy design models into ten schools of thought. Porter and Teece approaches are two of ten models. Most of those schools of thought concern with the content of the way strategy is designed. Carlopio (2009, 2011) proposes a completely different approaches from those proposed by Porter and Teece and also by some others. Carlopio (2009, 2011) proposes emphasizes the process of designing a strategy, not the content to be considered on designing a strategy. There are two main processes or activities in designing a strategy. The first one is to conduct research. The purpose of the research is to gain a deep understanding on consumers. This process demands thinking process. The strategy designer needs to put a lot of effort in divergent and creative thinking process. These thinking results are used as the inputs for developing strategy alternatives. the second one is to evaluate strategy alternatives. The strategy designer has to make sure that the strategy alternatives provide added value to the company. The chosen strategy is then developed into prototypes. The strategy designer has to make sure that the prototypes are appropriate to be implemented. If not, the designer may need to go back to the first activity or repeat only the second activity. This back and forth approach indicates that the strategy design is not a linear mechanism. Instead it is a iterative mechanism with creative and innovative approaches.

The beauty of Carlopio's approach that emphasizes on process is that the content can be adjusted easily. For that reason, Carlopio (2011) develop a strategy innovation model. This model is based on the premise that in an increasingly nonlinear world only non-linear strategy will create a competitive strategy that is able to generate substantial new wealth. This premise becomes the basis of the redefinition of the basis of competition within a new industry. The definition of a new strategy is in accordance with what is briefly explained above, arguing that industries may merge into a single industry such as communication and camera industries are merged in the form of smart phone. The company that is aware and move to the new defined industry may be able to develop a new, uncontested, radical, non-linear and innovative strategy that provide high competitive advantages to the company. This thought is also behind the development of the blue ocean strategy even though the principles are slightly different from the Carlopio's principles (Kim and Mauborgne, 2004).

The approaches of Perter, Teece and Carlopio, among others, become interesting to be combined. The ability to combine external-driven by Porter, resources-based by Teece and dynamic approach by Carlopio become the foundation to develop step-by-step process that consider both external and capabilities and at the same time, the trend of merging and changing definition of industry and the sustainability demands, mainly coming from social and environmental pressure. Furthermore, the effort of putting risk consideration suggested by Wheelen and Hunger may be formalized into a model (Djohanputro, 2015). This is the challenge of this study as explained below.

THE PROPOSED STRATEGY DESIGN MODEL

The following strategy design model is based on the following bases. The first base, the strategy has to meet between what the company is demanded and what the company needs to do. The first demand to the company is related to the need of customers. In order to be able to fulfill this demand, the company needs to formulize the strategic propositions. The strategic propositions are defined as the values contained in the product for customers that cover all aspects of the trend in the mind of customers. The values are related to economic value, preference value, social value and sustainability value. Economic value is related to how the product provides benefit to the customers above the costs. Preference value is related to how customers position themselves in the society when using the product. Social value is related to how the product or its producer provide the benefits to the society or at least, do not harm the society beyond the profitability of the company. Environment value is related to how the product or company help the sustainability of the environment without damaging the environment. The company may choose certain values to be offered to customers. However, this choice may reduce the competitive advantages of the company because customers easily move to the competitors once they offer more complete strategic propositions.

In order to fulfill the demand and strategic values to customers, the company needs to explore the opportunities and the trends. The opportunities may come from various external factors, either at global perspective, domestic perspective micro perspectives. The identification of trends needs to explore the strategic group movement. Competitors are dynamic. The playing field may change quickly because of some supporting factors, mainly the development of technology. The change in technology may result in the collapse of conventional technology such as typewriter against personal computer. The new technology may lead to the industry integration such as camera and communication into smart phone. The closeness of campus and industries may lead to the education model that offers the combination of education and work program. These trends may be explored from different aspects. For this reason, Carlopio (2011) requires to apply creative, divergent thinking process.

Another aspect included in the first base is that the company needs to understand what to do to respond to the demand, opportunities trends. To do this, the company needs to identify its capabilities. The capabilities may sustain if they fulfill some criteria. The first criterion is rareness. Its competitors cannot find and build the same capabilities. The rareness may come from the uniqueness or the acquisition of the special assets as the main sources of the capabilities. The second criterion is duplicability. It is about how easy the capability to be duplicated or copied by other parties. The more difficult to be copied, the better is the capability. The third criterion is manageability. If the company is able to systematically organize the assets or resources and provide the system to support the way assets or resources are organize to generate the capability permanently, the capability is expected to sustain. The fourth criterion is adjustability. The capability needs to be adjusted to respond to the dynamic conditions.

The second base, risk appetite and tolerance are employed as the assurance that the strategy chosen does not bear risks above the company's limit. It is the job of the board of directors to set up risk appetite and tolerance. Risk appetite is the statement about what risks are allowed ant what risks are not allowed to be taken by the company. Risk tolerance is the quantitative measure on the maximum value of a risk is allowed to be taken or retained by the company. Above the tolerance level, the risk must be reduced or avoided or transferred to other parties. In order to apply risk-based screening on strategy alternatives, the company must assess the risks by focusing on strategy risks and strategic risks related to each strategy alternative. The company focuses on the risks beyond appetite and tolerance and develops risks responds to bring the risks down below its tolerance. Otherwise, the strategy alternative is abandoned or modified.

The third base, the strategy chosen must fulfill the sustainability requirements. These requirements consist of three aspects, i.e., economic sustainability, social sustainability and environment sustainability. Economic sustainability is related to the economic benefit provided to the company in order to make it grow and sustain. The strategy has to assure the company to gain appropriate profits, value added and cash flow and at the same time build good reputation and prospect for the future of the company. Social sustainability concerns with the benefits received by society above social costs or negative impacts and the costs or impacts must be manageable and far from catastrophic. Environment sustainability is related to the assurance to preserve and enhance the quality of resources for the future generations.

The fourth base is the need to deploy strategy chosen into the system and infrastructure to make the strategy implementable and the operational level. What need to be done is to develop strategic initiatives to implement integrated risk management to develop strategic business model to provide strategy control mechanism.

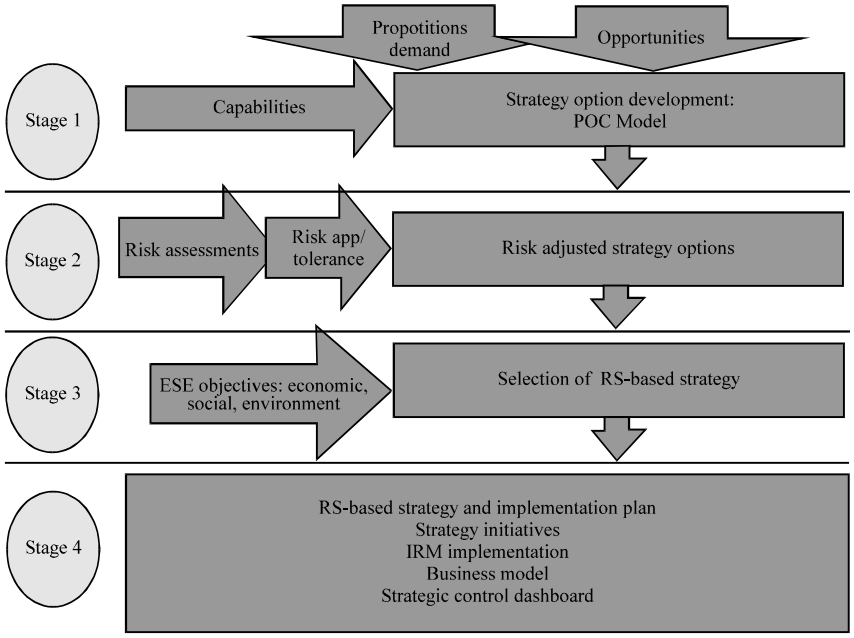

Fig. 1: The sustainability and risk based strategy design process

Those four bases are then translated into the step-by-step strategy design process as follows. The process consists of four main stages, i.e., strategy option development, risk-adjusted strategy options, sustainability-based strategy selection and strategy deployment. Figure 1 provides the summary of the strategy design process.

Stage 1 (strategy option development): The company starts with the environmental assessment. In general, environment consists of external and internal environments. Depending on the scope of operation, external environment may consist of global, regional or national assessment. The components of external environment include three factors, i.e., macro factors, strategic group factors and external stakeholder factors. Macro factors consist of economic, market, political, social, regulation, technological and physical factors. The main outputs of macro factor analysis are the opportunities available to the company.

There is a current trend for companies to put special efforts on identifying distinctive issues on social and physical environment. Petrini and Pozzbon (2010) argue that the ability to identify such distinctive issues and accommodate them into the strategic plan and objectives help companies to gain competitive advantages and benefits. This is not only to contribute to the sustainability of environment but also to build reputation of the company to the society at large. Galpin and Whittington (2012) suggest that the company need to identify what level of performance to be achieved, i.e., to protect its reputation to gain competitive advantages through the involvement in social and environment responsibilities or to integrate social issues into the responsibility of the company to behave as a good citizen.

Strategic group analysis is crucial at this stage where the competition is moving, what customers expect from the companies who offer the same or similar products and what the competing companies may offer their products to fulfill customers demand and expectation. A strategic group consists of companies that potentially directly and indirectly compete each others. Direct competition means that the companies offer similar products so as customers have choices. Indirect competition means that the products substitute each others. Potential competition means that companies that currently may not compete are potentially offer competing products through the modification of substitute products or the combination or amalgamation of several companies across industries to offer products with more functions and usages. This amalgamation may be supported by the enhancement of technology, the integration or global market and the demands of social and environmental activism.

Asset and resources that belong to the company become company's competences if they are organized well. There are two types of competences, i.e., general competences and distinctive competences. General competencies are mastered by many companies including competitors. Distinctive competencies, on the other hand, only belong to the company. These distinctive

competencies that provide competitive advantages to the companies are defined as capabilities as long as the company is able to maintain them sustainably.

In summary, macro analysis provides information on opportunities, stakeholders and strategic groups analyses provide strategic propositions while internal analysis provide information on capabilities. From this point, the company needs to combine those three ingredients, i.e., propositions, opportunities and capabilities, to generate strategy alternatives. To do this critical, analytical, creative and iterative thinking processes are important. The strategy alternatives combine those three basic ingredients into alternatives.

Stage 2 (risk adjusted strategy options): The focus on developing strategy alternatives at the first stage is on combining propositions, opportunities and capabilities in order to achieve strategic goals or objectives. The achieving the objectives but at the same, time bear high risks. High return tends to go hand in hand with high risk. Therefore, risk-adjusted performance may become low. At the extreme condition, the strategy alternative may not work if the risks are easy to take place and their effect are catastrophic. For this reason, risk considerations have to take the role on selecting or adjusting the strategy alternatives.

In essence, every strategy alternative has to be screened by risk appetite and risk tolerance. The alternatives that pass the screening process may be continued to the next stage. Otherwise, there are two options. The first option is to abandon the alternatives. the second option is to modify them and put back into the screening process. If they pass the screening process, they may continue to the next stage. If not they may be abandoned or modified again. This iterative process may take place several times depending on the company commitment, willingness and availability of time and resources to conduct the iterative process.

While the risk appetite and risk tolerance are the responsible of the board of directors, risks themselves are the responsible of the team to assess. Risks assessment consists of three main activities, i.e., risk identification, risk measurement and risk evaluation. In risk identification, the company needs to involve senior managers and staff because they are the persons who have broad view, long experiences and strategic views of the company. It is also valuable to involve external stakeholders to get their views on any possible event that affect the goals or the ways strategy alternatives are conducted. It is also important to note that the company needs to consider both downside as well as upside risks.

Risks are then, measured at least at two dimensions, i.e., likelihood and severity. There is another dimension of risk measurement, i.e., risk trend. The most used dimensions are certainly likelihood and severity or impact. The trend is rarely used because in integrated risk management practices, the trend is monitored regularly to evaluate whether a risk is declining, constant or growing. For this reason, trend tends not to be quantitatively measured. The problem with measuring strategy risks are that most risks rarely happen. As a consequence, database on the risk events and near misses are not available. This condition leads to the ways chosen to analyze risks. The most appropriate one is by applying qualitative method such as through the agreement among senior management or board members. Interviews and Delphi method are the most favorite approaches.

Based on the risk measurement, the next step is to evaluate the risks based on risk appetite and tolerance. This is the screening process of risks. Risk appetite and tolerance become the borderline of decision whether to accept the strategy alternatives or to reject them. The rejected ones are treated to be abandoned, responded or redesigned.

Stage 3 (sustainability-based strategy selection): A good strategy is not only safe from catastrophic risks but also able to fulfill the expected performance. The performance makes the company not only gain benefit but also to grow and sustain through exploiting the competitive advantages generated from the right strategy. As mentioned above there are three categories of expected performances, i.e., economic performance, social performance and environmental performance. The economic performance is clear. The ability to exploit the competitive advantages generate profit, value added, cash flow and at the end, company value or share price. This performance derives from the ability of the company to convert the advantages into growing, sustainable revenues and at the same time into managed expenses. This strong, growing, sustainable financial performance improves the wealth or shareholders.

Social performance represents the status of the company as a citizen. The company must contribute something valuable in order to exist and properly accepted by the societies that are directly or indirectly affected by the presence of the company. Many companies express the contribution to the society though corporate social responsibility or CSR, programs. Some programs are merely a kind of charity to societies. Some other programs are considered as strategic CSR in which CSR activities directly contribute to the company strategy. Poverty alleviation, hunger eradication,

sustainable agriculture development, health promotion, education enhancement and opportunities, women empowerment and work for all policies are among the CSR program that can be treat as charity as well as strategic CSR programs.

Environment performance represents the effort of the company not only to use the resources from the environment but also the ability and commitment to preserve and enhance the quality of resources for the future generations to come. The document of sustainable development goals or SDGs, provides a good references for understanding and generating sustainable performance such as clean water sanitation development, the availability of sustainable energy, quality of living environment, the effort on climate change and the preservation of sea as the economic sources.

It is important to note concerning the those three categories of performances. Hansmann *et al.* (2012) and Hernandez and Alvarez (2013) economic performance may contradict with social or even environment performances. Salzmann *et al.* (2004) find it difficult to identify whether economic performance leads to social or environment performances or vice versa. This creates a difficulty which performance to come first in order to reach the total performances in the long run. Fontaine (2013) argues that social and environment performances improve the image of the company and as a consequence, drive the financial or economic performance. This statement indicates that social and environment performances need to come first before economic performance, even though the company needs to consider the cash flow performance to make sure the company runs well when it emphasizing the contribution to the society and environment.

Stage 4 (strategy deployment): The essence of this stage is to translate the strategy chosen into an actionable and controllable plan. There are four main instruments to be developed at this stage. They are strategic initiatives, business model architecture, integrated risk management strategic control dashboard.

Strategic initiatives are action plans designed to direct the company to the expected objectives outside regular activities. The initiatives include projects, programs and investments to support and to strengthen the competitive advantages of the company. In order to develop strategic initiatives, the company starts with identifying the gap between what existing capabilities owned by the company and what the expected capabilities that should be owned by the company in order to deploy the strategy and to reach its objectives. The gap is translated into initiatives that are the responsible of certain directorate, division or unit within the company.

Business model architecture is the picture or snapshot that represent of how each main component of the company is linked one to another in order to provide product to customers and as a result, the company gains benefits or reaches performances. There are several types of business models available now such as business model canvas or BMC and value chain. A business model architecture combines a business model with information and communication technology or ICT.

The role of ICT is mainly to support and to enable the business model to be powerful, dynamic, efficient effective. It is hard to imagine nowadays that a company can survive without ICT support, at least for building database, process and communication. To do this, the company needs to choose the right technology, programs or applications and database system to support operational, customer relationship innovation management.

The application of IRM is to increase the confidence of the company to achieve its objectives by reducing negative surprises and at the same time, by being prepared to grasp unexpected opportunities. It is supposed that the company develops IRM architecture before starting with the first stage of strategy design process. It because IRM comes into play at very beginning, i.e., in the form of providing risk appetite, risk tolerance and assessing strategy risks. Therefore, the organization structure that accommodates risk management unit and activities, risk policy and risk manual and systems that support the development of risk culture need to be available at the first place. There are several IRM Models available with a slight different approach and the company may choose one of them or combine them to be implemented (Berg, 2010).

IRM at strategy deployment stage focuses more on the implementation plan. The IRM process must be in place in order for the company to be prepared to manage risks day by day. To organize easier, the company needs to classify risks into some categories such as strategy risks, financial risks, operational risks and external risks. Other categories are based on the sources of uncertainties. To the extent the company needs to respond to the risks, besides its risk appetite and tolerance, the company considers its capacity, asset and capabilities acquired and technology employed (Froot *et al*., 1993; Das and Teng, 1998; Desgagne, 2004; Canal and Guillen, 2008; Pironti, 2008; Aumann and Dreze, 2009; Guinchard, 2011). The board of directors has to make sure that IRM is the integral part of decision making at the whole company (Miller, 1992; Canal and Guillen, 2008; Berg, 2010).

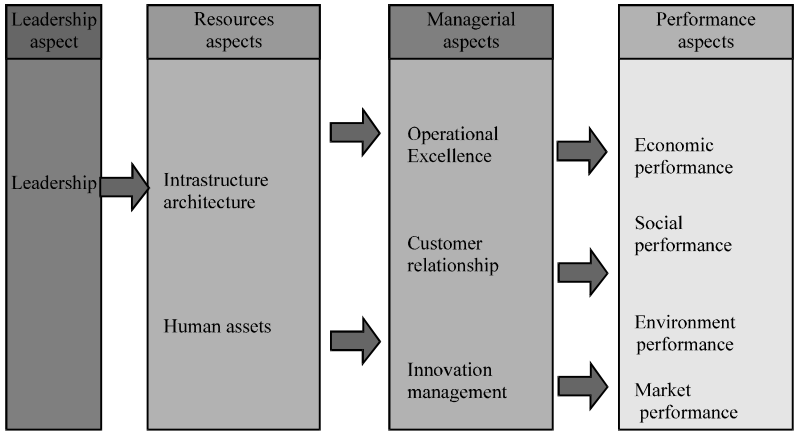

Fig. 2: Strategic control dashboard

The last component of strategy deployment is strategic control dashboard. It is a tool that helps management to monitor and control the achievement of objectives and performance to monitor the progress the initiatives and to provide information of what actions to be taken to direct the company achieves its objectives and performances as expected. There are several strategic control dashboards available. Figure 2 provides a simple dashboard model that stressing on the important components to be in place. This is the 4-3-2-1 dashboard model. There are four components to be monitored at the right side. Those four components are the performance aspects. The first three components are Economic Social Environment (ESE) performances. The last component is market performance. It is added to the other three components because market contains the main stakeholders of the company, i.e., customers. Before understanding the ESE performance, the company needs to review its market performance in terms of market shares, customer satisfaction and market growth. The assumption is that if the market accepts the products, the other performance are most likely achieved.

The three components at the left side of performance components are the managerial aspects. Those three components are operational excellence, customer relationship and innovation management. These are the measures of the daily activities in order for the company to reach its customers and to fulfill the propositions and at the same time to serve its main stakeholders. The two components at right side of the managerial aspects are called resources aspects. There are two main resources components that need to be monitored in the dashboard. These are infrastructure architecture and human assets. The availability of them at the right amount, quality time make the company to have excellent operation. The last is the leadership aspect. It is about the quality of the leadership to drive the company. Some important factors to e monitored at the leadership aspect include the deployment of vision and mission, the quality of corporate governance, the "tone from the top" and the quality of two-way communication from top to down and from bottom to the up. The leadership aspect becomes the main driver of the company to reach its objectives and to execute its strategy chosen.

CONCLUSION

The strategy design model proposed here is an alternative in order to formally accommodate risk considerations, together with sustainability considerations, into the formulation of a company strategy. This model gives attention not only on how a company grows in the market and reaches its economic benefits but also on how the company sustains in the long run. Putting risks at the strategy formulation stage results in the high confidence to achieve its objectives by avoiding negative surprises and grasping unexpected opportunities that suddenly come to the market. Putting social and environment issues to rank the strategy alternatives results in chance of fulfilling two other main stakeholders that are currently have power in the society.

This strategy model, however, needs more attention on the last stage, i.e., the strategy deployment. This study focuses more the first three stages. Another study on what kind of strategy initiatives and strategic control dashboard still need to be elaborated. By doing so, practitioners may be able implement the model, not only in designing strategy but also in translating the strategy into more actionable program. This is the concern on the further research.

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