

THE STRATEGIC DEVELOPMENT MODEL OF ORGANIZATIONAL DYNAMIC CAPABILITIES AT PRIVATE HIGHER EDUCATION INSTITUTIONS USING SOFT SYSTEM METHODOLOGY

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Abstract

Today, Indonesian private higher education institutions (IPHEIs) are facing enormous challenges regarding their existences due to dynamic environment such as competition, changing government policies, demanding needs of industries etc. Contradictory among such institutions in responding to the dynamic environment is interesting topic to study. The objectives of this paper are three folds, first is to describe the use of Soft System Methodology as an epistemological bases in facing such a complex, dynamic problems. The second is to build institutional model of private higher education institution sustainability. The third is to develop the strategic model of organizational dynamic capabilities of private higher education institutions. The result of this study shows that there are 21 stakeholders that influence the sustainability of private higher education institutions. In addition, the institutional model of private higher education and the strategic model of organizational dynamic capabilities at private higher education institution describe the process of coordinating, learning, and reconfiguring the private higher education institution stakeholders.

Keywords: private higher education, sustainability, dynamic capabilities, soft system methodology

1. INTRODUCTION

The research to address the cause of the organization that can survive in a very long time has been done by many people. So far, there are four paradigms that can explain that matter (Teece et al, 1997). First is the dominant paradigm during the 80's that is competitive approach developed by Porter (1980). The second is strategic conflict approach (Shapiro, 1989). The third is the resource-based competitive advantage (Hammel and Prahalad, 1996; Collis and Montgomery, 2005; Barney et al, 2008). The last approach (the fourth) is the dynamic capability that emphasizes to the exploitation of internal and external competencies to respond the environmental changing (Teece et al, 1997; Eishenhardt and Martin, 2000; Helfat, 2009). Teece (2009) explains that the process of dynamic capability starts from the sensing, seizing and managing threats/transforming. Although the concept has begun to be widely accepted, or at least discussed among experts, but the empirical evidences supporting this concept are still very sparse.

In one last decade, IPHEIs face major challenges related to their sustainability in a very dynamic environment such as intense competition, government policy, industrial demand related to PHEIs graduates' competence and so on. Based on data in 2010, there were about 30% of the total 3.010 of PHEIs to be closed down by various factors including their inability to face the intense competition.

The more intense competition with both State Higher Education Institutions and other PHEIs is also seen in Coordination of Private Universities Region II that includes the area of South Sumatra, Bangka Belitung, Lampung and Bengkulu. It is shown from the growing number of private universities in the last 10 years that reaching 90%. Five forms of Higher Education Institutions (university, college, institute, academy and polytechnic) in Coordinator of Private Universities Region II compete to get new students, in order to be able to survive in the dynamic of a very rapid environment changing. The impact of the competition obviously appears in higher education institutions in the form of university totaling 11.59% from the total number of private universities in this region, in which 30% of the private universities over the age of 10 years only have less than 1,000 students. It surely affects the sustainability of those PHEIs in the future.

The purposes of this paper are to (1) describe the use of Soft System Methodology as an epistemological base in solving such a complex, dynamic problems, (2) build institutional model of private higher education institutions sustainability, and (3) develop a strategic model of organizational dynamic capabilities of private higher education institutions.

2. CONCEPTUAL FRAMEWORK

A. Philosophical Problems

Most scholars in Indonesia have been experiencing to the use of quantitative statistic method to cope with social issues including educational problems. Others use qualitative methods to get deep analysis of certain issues. Instead of their strength, these methods always try to reduce the complicated problems into fewer variables to be analyzed partially based on existing theoretical foundation. The most fundamental assumption toward the use of such methods is their attempts to use analytical thinking in order to get clear understanding of the issues. The very dependence of this way of thinking will lead difficulties to solve problems since most effective solutions come from synthesizing various aspects that are more relevant to future scenarios. In addition, due to its rigid method, the researchers do not have enough room to be more creative during his/her journey of inquiry. Thus, many educational policies face failures in their implementation due to either lack of rigorous research or philosophical mistakes in coping with those complicated problems.

B. The Needs of System Thinking

Before working with system approach, first one should understand the system thinking as a method to understand how elements within a system interact with one another. Rooted from the work of Von Bertalanfy (1968) known as General System Theory (GST), the system approach seeks to understand the universality of systemic order, behavior and interdependency of part that characterize living and non living systems. It studies “wholes” and “wholeness”. This method is regarded as most suitable in dealing with complex and dynamic issues. We should consider a complex problem as a system that contains many elements interconnected and interdependent among each other. We cannot separate each element, even a group of them from the whole since each has its role and function supporting the work of the system. In other words, there is no more or most important element within the system so that we should consider them having the same level of significance as the whole. In addition, analyzing a part of a system will lead to sub optimizing its part in one side, but will break the meaning of the system as whole in the other side.

In the system thinking, we also consider system, subsystem, and supra system. A school organization as an open system should consider its sustainability dependent upon not only its internal factors what so called controllable variables, but also external factors that cannot be controlled by school management. In other words, a complex issue may be influenced by elements outside of the system what in strategic thinking is called external environment such as global economic, cultural and political trends. The sustainability of a system may also be affected by the balance relationship of the supra system. For example, the quality of student consists of elements such as teacher quality, curriculum, infrastructure, school management where the quality of teacher is influenced by factors such as teacher training, working environment, salary system etc. considered as subsystem or supra system of the whole.

In the system thinking, there are possibilities for researchers to expand their views in seeing the world holistically by multi-discipline, inter-discipline and trans-discipline. For example, in the issue of curriculum development, we should look at the problem based on multi-discipline of management, education, finance, economics, psychology and even math or biology. Using various disciplines, the issue of curriculum development will be seen more clearly, and may open a possibility to emerge in a new called trans-discipline.

In system thinking, one should consider a system using the terminologies of cybernetic, holistic and effective. Cybernetic means that every system has to have a goal to be achieved. Holistic means that one should view a system as whole in order to achieve the goal. And, effective means that the system must be able to operationalize in the real world. Most of the solutions we got in dealing with the educational problems have lead to other problems due to the lack of the three thinking principles. For example, the failure of competence-based curriculum is coming from the lack of clear goal toward the policy; even the curriculum is developed without a deep philosophical discussion. In addition, the policy has lead to the need of teacher performance improvement through teacher certification program that has been claimed failed too. The failure of the curriculum may come from a lack of understanding toward the implementation of the policy. The school is unable to translate clearly the curriculum in operational

level. Thus, a good strategy is not followed by a good implementation within the school operation. One needs to find a technical decision for bridging the strategy and operation.

Many problems in making educational policies also come from a lack of understanding about the future. This is due to conventional method of thinking which mostly using analysis instead of synthesis. Analysis focuses on past problems. On the other hand, synthesis focuses on future solution for solving problems. Analysis attempts to understand each part, even by breaking down into smaller parts. On the other hand, synthesis attempts to converge various elements to get universal understanding. Analysis focuses on why a problem occurred. Synthesis focuses on how to solve the problem. Despite of each strengths and weaknesses, in the use of system thinking one should use the two modes of thinking in his/her work.

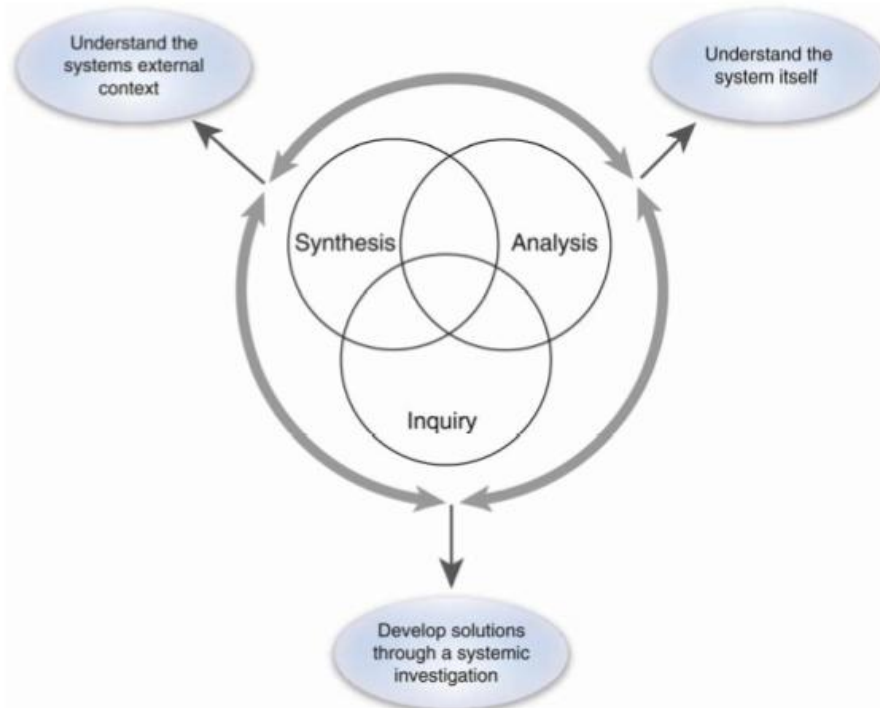


Figure 1. The existence of Analysis, Synthesis, Inquiry (Edson, 2008)

C. Hard System vs. Soft System Methodology

In the system approach, there are two kinds of approach called Hard System Methodology (HSM) and Soft System Methodology (SSM). Each has its suitability for specific purposes. Hard System Methodology (HSM) is usually related to system engineering and technology engineering. It is thinking about systems. On the other hand, Soft System Methodology (SSM) is associated with system assessment, policy, social and government system. It is thinking from system.

There are some other distinctions between HSM and SSM. Unlike Hard System Methodology, Soft System Methodology is suitable for dealing with ill-structured problems with unclear objectives. In Soft System Methodology, researchers are allowed to compare several conceptual models. It is also allowed to use several different tools in order to achieve research objectives. More important is Soft System Methodology focuses its inquiries on human activity system that based its process on participation and learning. It means that the inquiry in SSM is never ending process as dynamic situation develop. Thus, SSM is the most suitable method in dealing with complex, dynamic social problems such as educational problems.

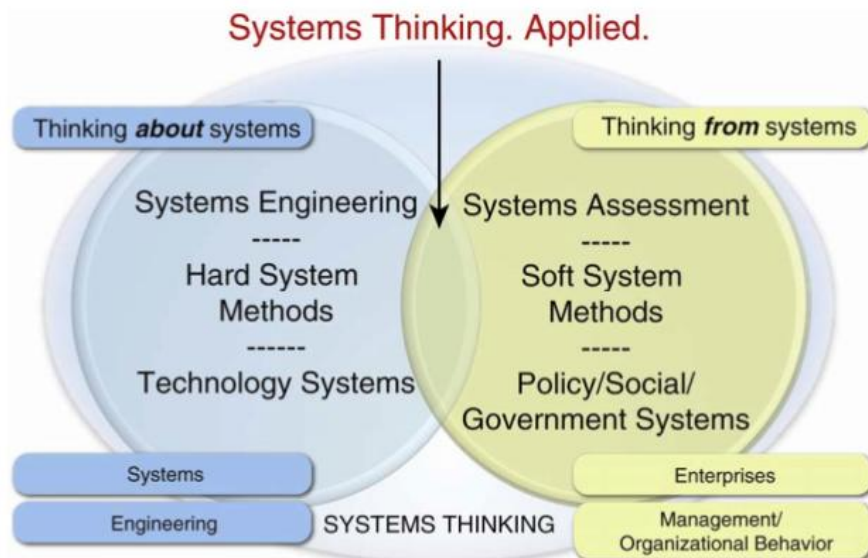


Figure 2. Hard and Soft System Applied (Edson, 2008)

D. Soft System Methodology

Peter Checkland developed soft Systems Methodology (SSM) in the late 60's at the University of Lancaster in the UK. Initially it was seen as a modeling tool, but in later years it has been seen gradually as a learning and meaning development tool. Even though it develops models, the models are not made-up to denote the "real world", but by using systems rules and principles allow us to structure our *thinking about* the real world. Further, he suggests that the models are neither descriptive nor normative, though they may carry elements of both. Like many other systems approaches, he argues that the heart of SSM is a comparison between the worlds as it is, and some models of the world as it might be. Out of this comparison arise a better understanding of the world ("research"), and some ideas for improvement ("action"). Initially, Checkland developed what so called "Classic Seven Steps of SSM" as shown in figure 3. However, scholars may use their creativities allowed in system approach using various methods and techniques to achieve research goals as long as it related to modeling human activity system.

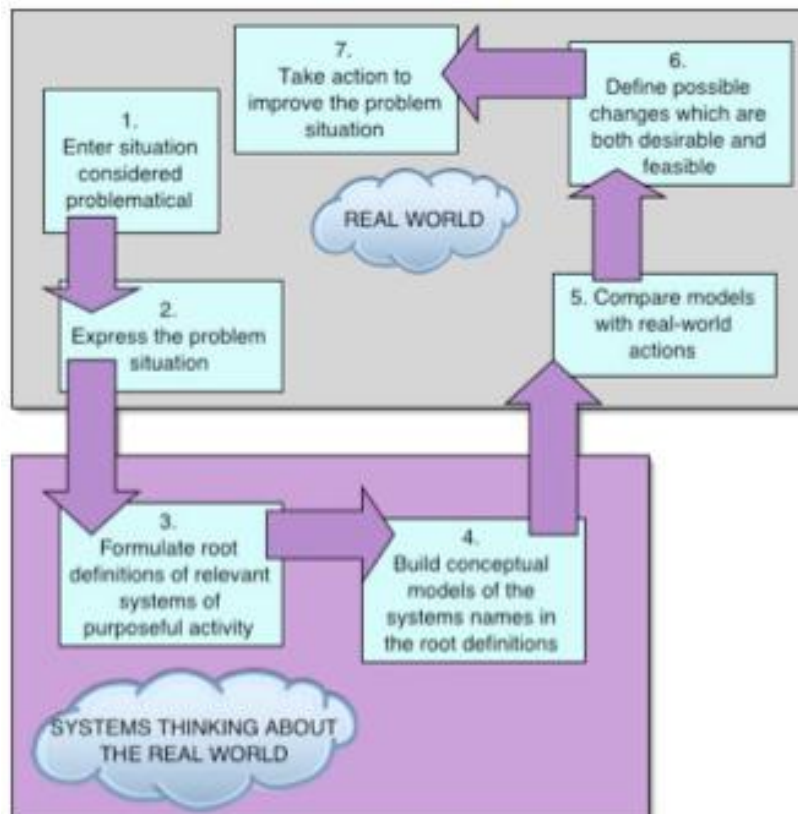


Figure 3. Checkland 's Classic Seven Steps of SSM

Before describing the conceptual framework which is a preliminary model of this study, the preceding description of the circular diagram of private higher education institution's sustainability is presented (Figure 4) which is developed from the model of Moizer and Tracey (2010) and the obscure box diagram of development system of organizational dynamic capability on PHEIs (Figure 5).

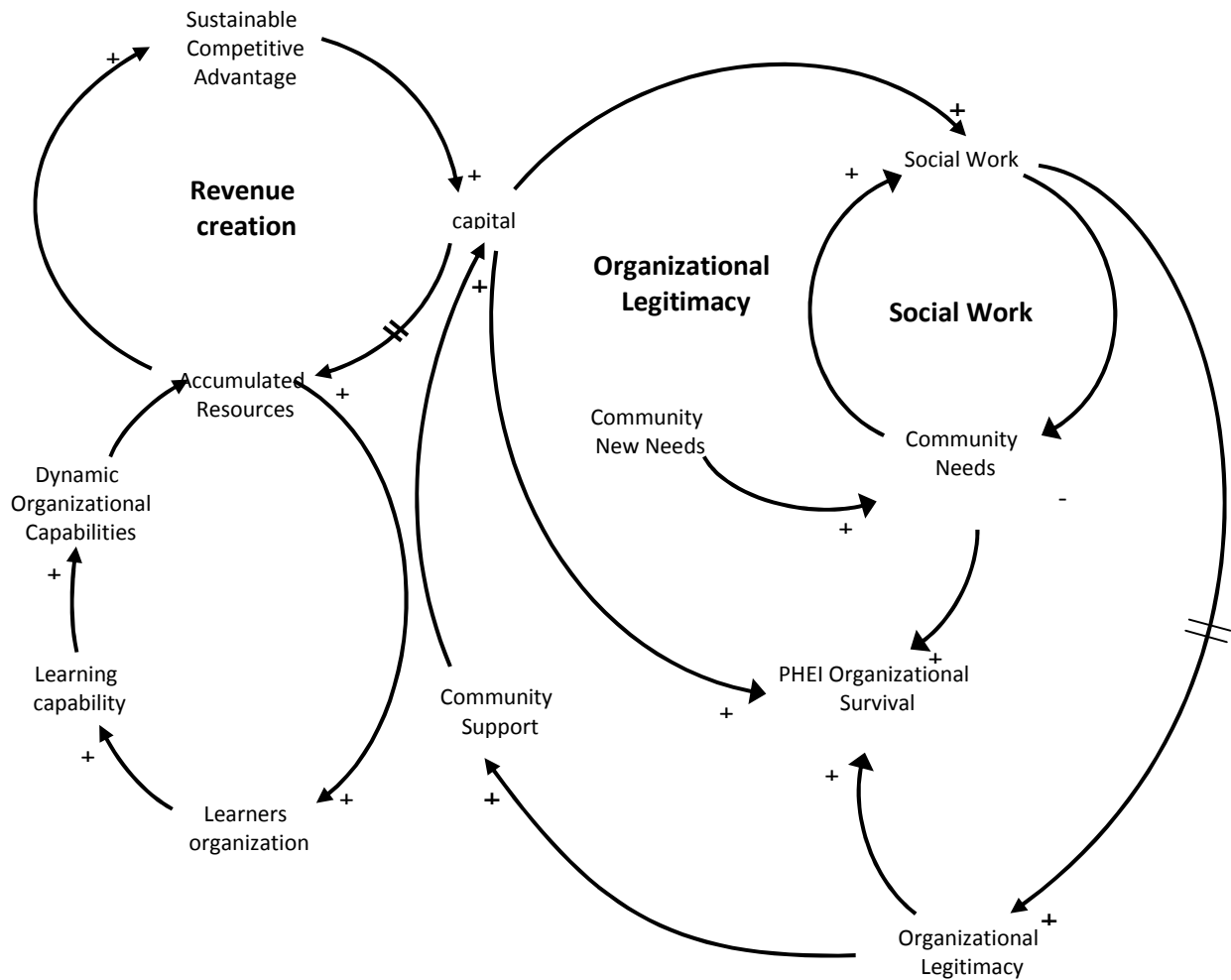


Figure 4. Clausal Loop of PHEI Organizational Sustainability

Based on the Figure 5, the conceptual framework of initial strategic model of the development of organizational dynamic capability on PHEIs is built and shown in Figure 6. The journey of this system is initiated with sensing system (sensor) that identifies the factors which are the external and internal inputs. The tools used for this sensing are in-depth interviews, expert surveys, and textual analysis. The next stage is filtering (seize) in order to select the external and internal factors that predominantly influence the sustainability of private higher education institution which will be used at the later stage. The third stage in that initial model is to build the alternative future scenarios and the competitive advantage basis. The method used to construct the future scenarios is Participatory Prospective Analysis (PPA). Furthermore, through the experts' discussion, the future scenario that is most likely to happen is determined. In facing the future scenario, PHEIs should be able to build the best strategy from different combination of resources and capabilities. At this stage, the Exponential Comparison Method (ECM) is applied. In more detail, the conceptual framework of organizational development on PHEIs system is presented in Figure 6.

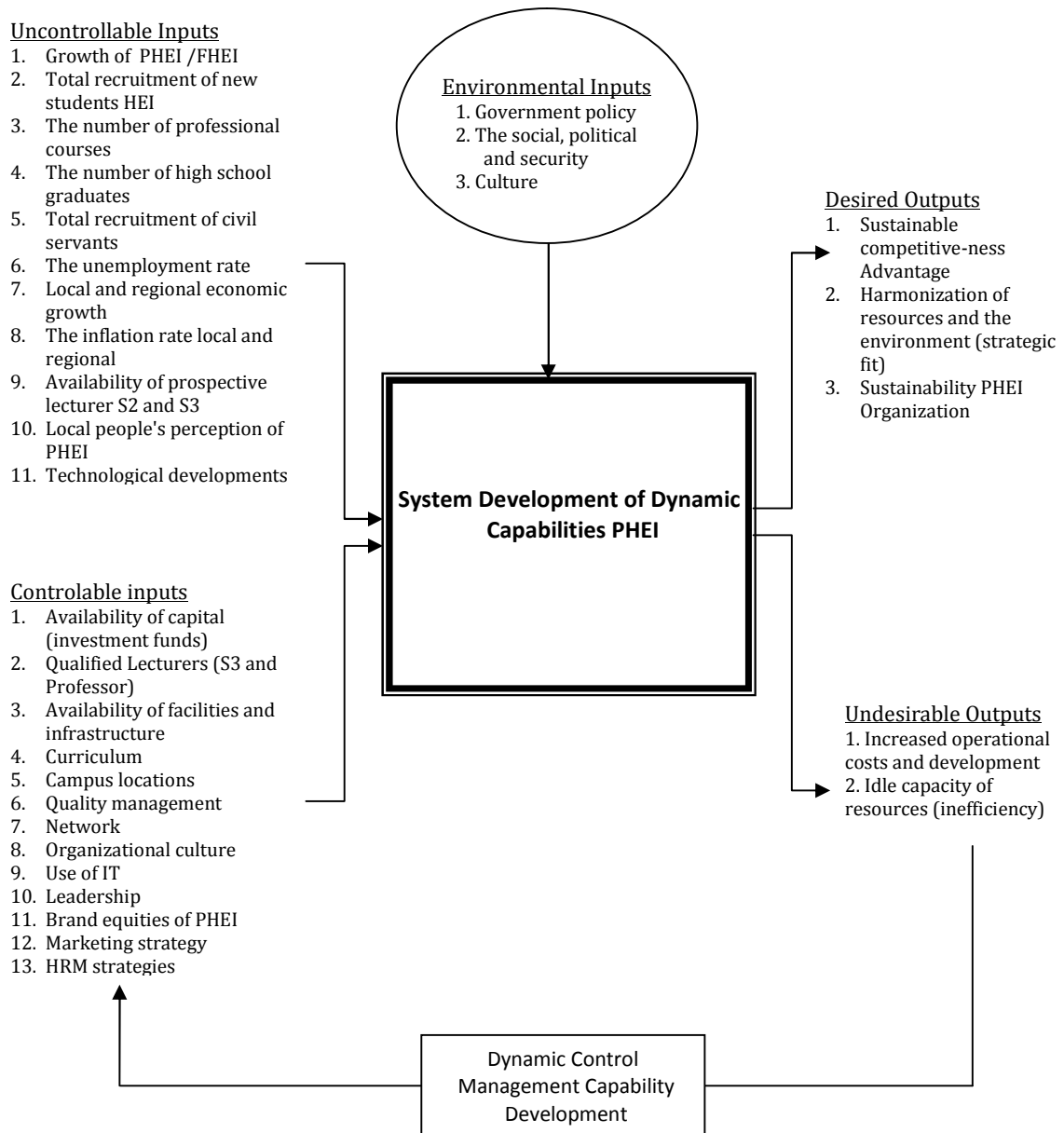


Figure 5. Black Box Diagram of System Dynamic Organizational Capabilities Development of Private Higher Education Institutions (PHEI)

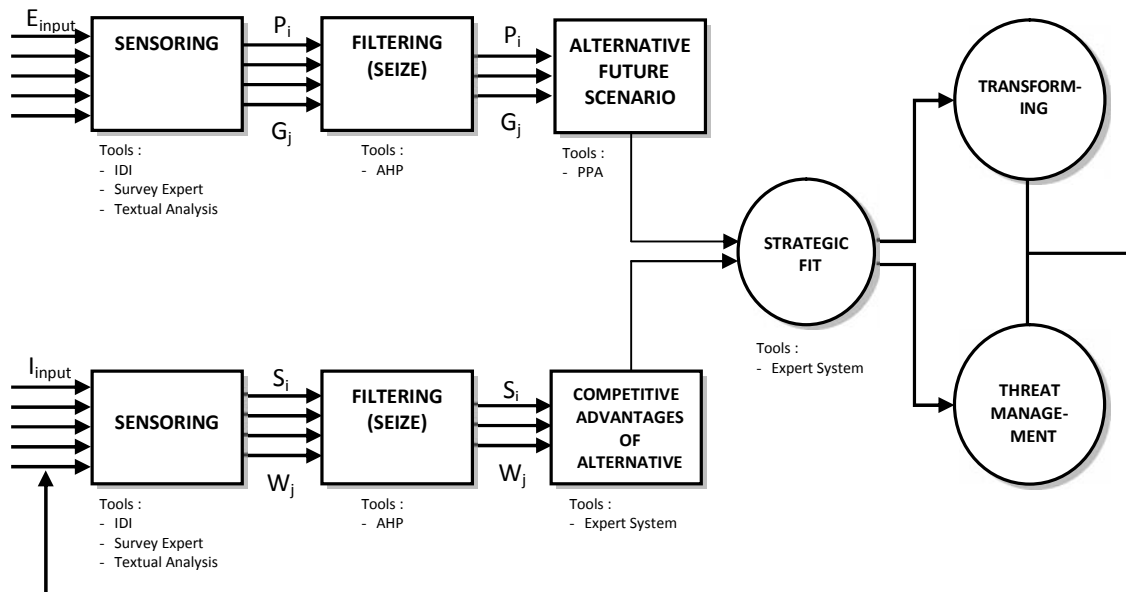


Figure 6 The conceptual framework of model of system of organizational dynamic capability development on private higher education institution.

3. RESEARCH METHOD

This study used system approach focusing on designing a model of dynamic capability development strategy on private higher education institution. Data was collected through the textual analysis, in-depth interviews, expert surveys, focus group discussions and questionnaires. The institutional models were developed based on the results of previous study using several analysis tools such as Analytic Hierarchy Process (AHP), Participatory Prospective Analysis (PPA) and the Exponential Comparative Method (ECM) (Barusman, 2013).

4. RESULTS AND DISCUSSIONS

A. The Most Suitable Strategy

From the various alternatives that have been collected in experts discussions, selection of the best strategy referring to the external dynamic scenario that most likely to occur is conducted. The use of Exponential Comparison Method (ECM) is due to the consideration of the available existing number of alternatives decisions and the plural criteria. In this case, the decision criteria used are: 1) the alignment with the organizational values and cultures of private higher education institution, 2) the easiness of selected and implemented decision and 3) the consequence of finance availability in implementing the selected decision. Based on the result of ECM data processing using the geometric average from 7 (seven) PHEIs that become the sample of this study, the best strategies are obtained. They are as follows:

1. The leadership strategy that motivates or encourages, empowers, committed to private higher education institution image, and adopts the values of change and being open.
2. The funding strategy that can be done by increasing the tuition's revenue and implementing cross-subsidy as well as encouraging the revenue's improvement outside of tuition through a variety of industrial cooperation. Related to the financing, there is a need to increase the funding allocation for human resource development and infrastructure as well as other quality oriented academic activities such as research and community service.
3. The human resource development strategy that improves the lecturers' quality through continuing education, the development of learner's attitude, open and anti-status quo, the quality orientation on all human resource policies and the need to build the human resource management system that can create a comfortable working environment and clarity of reward and punishment system.
4. The strategy related to the curriculum that suits the demands and needs of both local and national community, particularly the industrial party which is always up to date through the periodic reviews by involving various stakeholders both internal and external of the organization.

B. Institutional Model of Sustainability of Private Higher Education Institutions

To see the effect of the external dynamic towards the sustainability of private higher education institution, it is necessary to illustrate the institutional model of sustainability of private higher education institution (Figure 7). The institutional model building is done in some stages, namely (1) identification of interested actors in the sustainability of the PHEIs, (2) defining the roles and functions of each actor, (3) the determination of relationship among actors. Model of Institutional Sustainability of Private Higher Education Institution has succeeded to identify three elements linked actors, namely:

1. Private higher education institution's elements comprising of the foundation of private higher education institution as the legal entity managing the private higher education institution, private higher education institution, students, alumni, parents and community.
2. Government elements comprising of Ministry of Education and Culture, Higher Education, Coordinator of Private Universities, National Accreditation Board of Higher Education, another Ministry, Local Government, Education Department and Manpower Department.
3. Industry elements comprising of industry, Competitors (other higher education institution), Professional Association, Finance/Banking Institution, other Research Institutions, other Quality Assurance Agency and Mass Media.

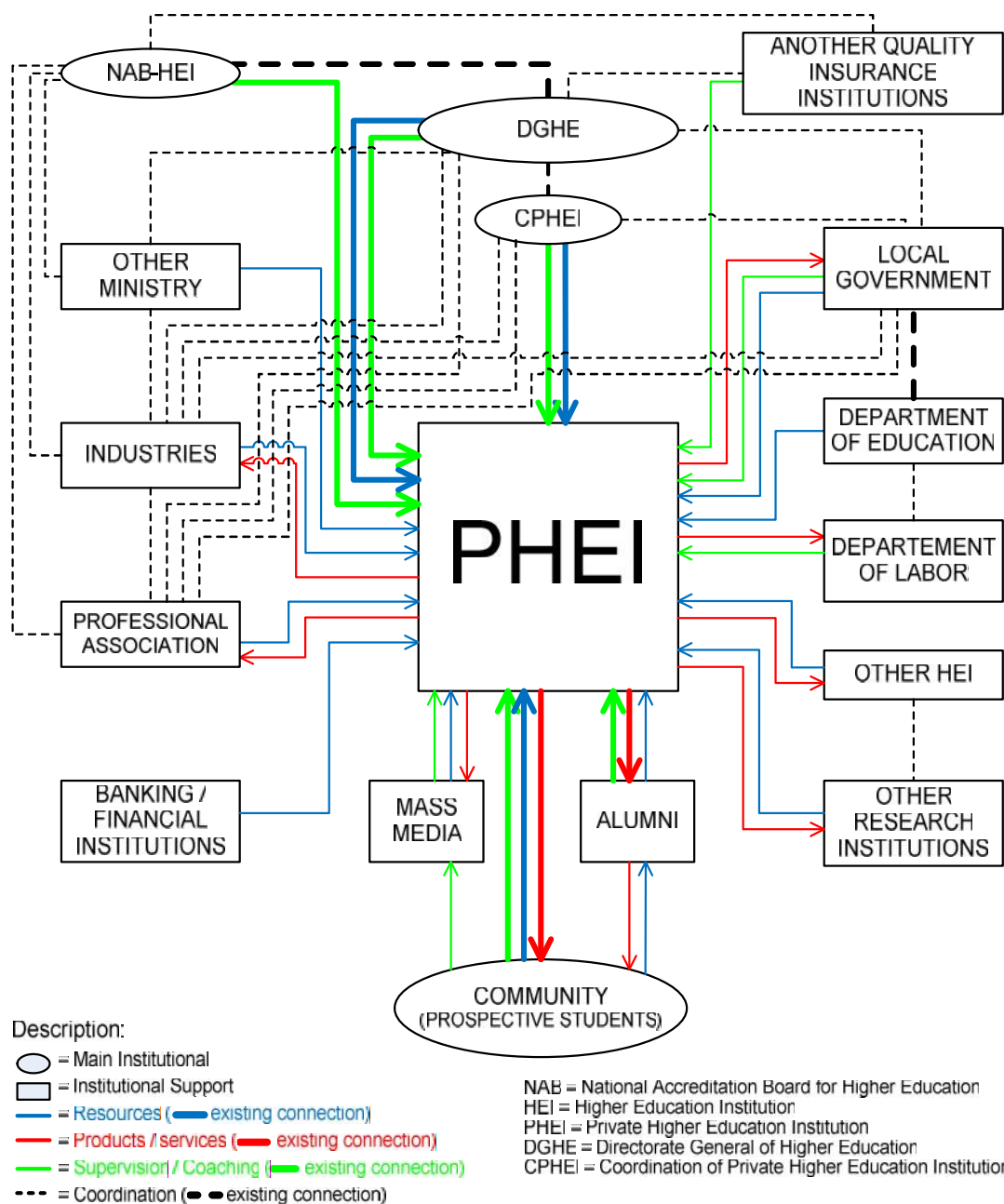


Figure 7 Model of Institutional Sustainability of PHEIs

C. Development Model of Organizational Dynamic Capability at PHEIs

In order to respond the dynamic of the external environment reflected from the model of institutional sustainability of private higher education institution, therefore, the strategy that is able to create a sustainable competitive advantage is needed. Dynamic capability to be considered as the suitable strategy to accomplish the purpose in which the organization of private higher education institution is required to continuously adapt the dynamic of environment by integrating, building and rearranging the configuration of internal and external competency (Teece et al, 1997).

The design model of dynamic capability development of private higher education institution is adopted by the adjustment of Teece's concept (2009) which has been used in earlier model of the conceptual framework of this study (Figure 6) where the organizational application applies the concept of organizational learning. Furthermore, the built model also considers the implementation of knowledge management that uses a database of research result in the form of alternative future scenario and recommended alternative strategy. Therefore, the development of information technology-based software proposed by Marquard (1996) is particularly relevant regarding to the implementation of strategic model of the development of organizational dynamic capability of private higher education institution.

In this research, the developed model is the institutional model describing the relationship among the relevant actors in internal organization related to the development of organizational dynamic capability (Figure 8).

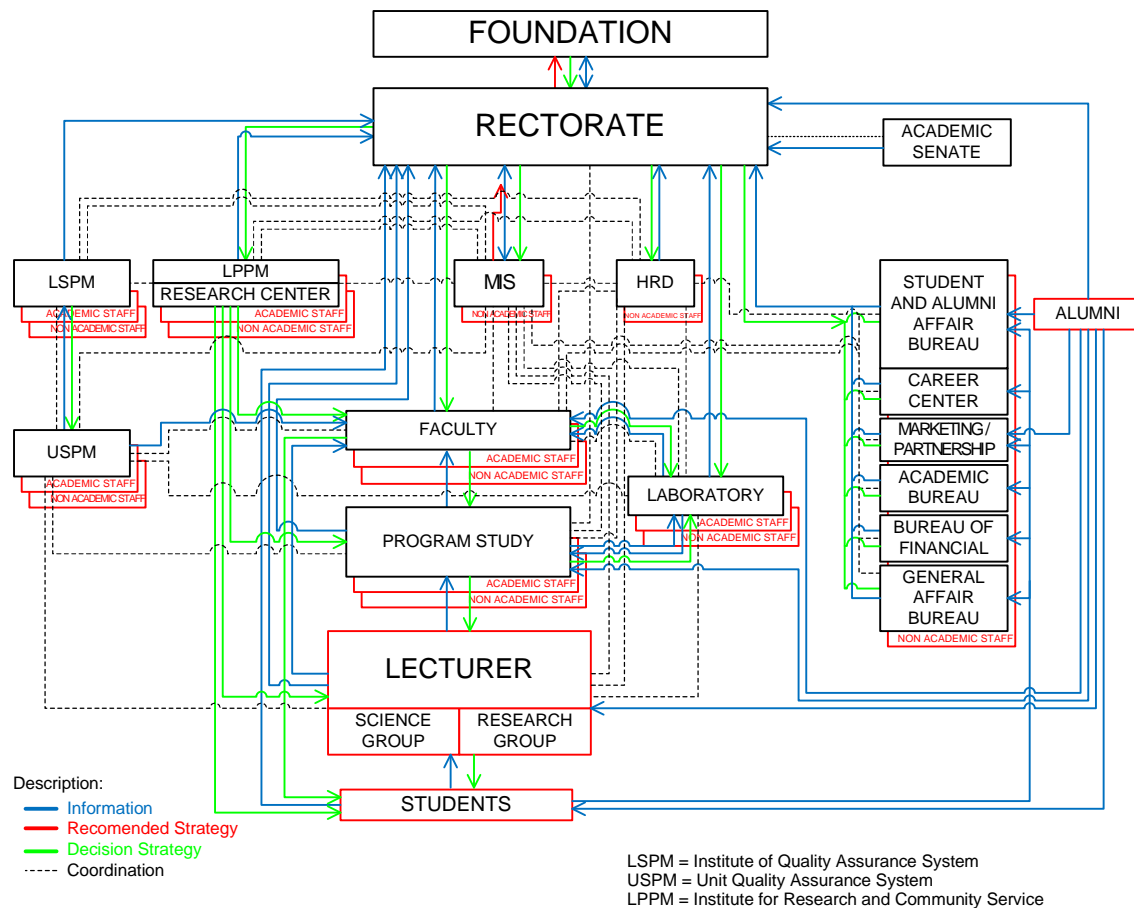


Figure 8 Model of the Development of Dynamic Capability of Private Higher Education Institution

5. CONCLUSIONS AND RECOMMENDATIONS

A. Conclusion

1. Soft System Methodology is considered to be the most appropriate approach in dealing with complex, dynamic problems such as sustainability of IPHEIs. It is also considered not only as research approach but also as managerial technology that can be applied in any organization circumstance including the development model of Dynamic Capabilities.
2. The stakeholders that influence the sustainability of IPHEIs are internal and external stakeholders. They are foundations, the management of the IPHEI, students, alumni, parents, Ministry of Education and Culture, Directorate General of Higher Education, Coordinator of Private Higher Education, National Higher Education Accreditation Body, Other related Ministries, Local Government, Other Higher Education Institutions, Industry, Professional Association, Research Centers, Quality Assurance Institutions, and Mass Media.
3. Institutional Model of Sustainability of IPHEIs describes the process of coordination, learning and reconfiguration among all stakeholders either internal or external.
4. The Development Model of Dynamic Capabilities at IPHEIs describes the process of coordination, learning and reconfiguring among all stakeholders either internal or external in facing the dynamic of environment by considering the process of organizational learning and knowledge management.

B. Recommendations

1. IPHEIs should consider the use of Soft System Methodology as managerial technology in order to deal with complex, ill-structure managerial issues such as organizational sustainability.
2. IPHEIs should consider all stakeholders either internal or external in order for them to be adaptive and to sustain within dynamic environment.
3. IPHEIs should keep harmony with all stakeholders by building cooperation in the process of coordination, learning and reconfiguration in order to continuously develop in the future.
4. PHEIs need to continuously monitor the dynamic of the external environment through the Model of Institutional Sustainability of private higher education institution. This model describes comprehensively about the relationship among institutions concerned actors towards the sustainability of private higher education institution. Furthermore, in order to develop the organization's ability to adapt the dynamic of the external environment, the Model of Development Dynamic Capability of private higher education needs to be implemented. As the Dynamic Capabilities is identical with learning organization then the PHEIs need to implement the organizational learning and knowledge management.

REFERENCE

- [1] Direktorat Akademik Ditjen Dikti. 2010. Facts and Figures. Jakarta: Direktorat Akademik Ditjen Dikti.
- [2] Barney JB, Hesterly WS. 2008. Strategic Management and Competitive Advantage: Concept and Cases. Pearson Education. New Jersey.
- [3] Barusman MYS. 2013. The Development Strategy of Competitive Advantage at IPHEIs. International Journal on Education vol.1 no.1
- [4] Collis DJ, Montgomery CA. 2005. Corporate Strategy: Resource-Based Approach. McGraw Hill.
- [5] Edson R. 2008. System Thinking Applied A Primer. Asyst Institut Oct. 8 vol. 1.1.
- [6] Eishenhardt KM, Martin JA. 2000. Dynamic Capabilities: What Are They? Strategic Management Journal 21: 1105-1121.
- [7] Hamel G, Prahalad CK. 1996. Competing for The Future. Harvard Business School Press.
- [8] Helfat et al. 2009. Dynamic Capabilities: Understanding Strategic Change in Organizations. Blackwell Publishing.
- [9] Marquardt MJ. 1996. Building The Learning Organization: A System Approach to Quantum Improvement and Global Success. McGraw Hill.
- [10] Moizer J. dan Tracey P. 2010. Strategy Making in Social Enterprise: The Role of Resource
- [11] Allocation and Its Effects on Organizational Sustainability. System Research and
- [12] Behavioral Science 27, 252-266.
- [13] Porter ME. 1980. Competitive Strategy. Free Press. New York.
- [14] Teece DJ, Pisano G, Shuen A. 1997. Dynamic Capabilities and Strategic Management.
- [15] Strategic Management Journal 18(7), 509-533.
- [16] Teece DJ. 2009. Dynamic Capabilities & Strategic Management: Organizing for Innovation and Growth. Oxford University Press, New York.