

# Risk Management System Design Planning at the University Towards a State University Legal Entity

(Study at Vocational Education Program of Universitas Brawijaya)

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**Abstract**—Risks have become an integral part of our society and as one of the public services, higher education institutions are face many challenges such as high levels of competition, increased costs, and scarce state resources. This study aims to design a risk management system in response to the transformation of Universitas Brawijaya into Legal Entity State University (PTN BH). The research method used in this research is qualitative with a case study at Vocational Education program of Universitas Brawijaya. The results show that the vocational education program of Universitas Brawijaya has met the criteria by establishing policies, guidelines, procedures, and implementation instructions for risk management. This result proves that Universitas Brawijaya is always committed to implementing risk management as part of a continuous process in improving and developing the quality of higher education institutions. The effectiveness of risk management is highly dependent on the function of the risk management unit in carrying out its duties and functions in implementing risk management at Universitas Brawijaya.

**Keywords**—risk management, system design, key performance indicators

## I. INTRODUCTION

Risks have become an integral part of our society. Risk taking is inherent to our lives, while it also drives innovation and development. This is supported by the fact that risk research is a priority for many fields of study [1]. The study of higher education in the twenty-first century is now firmly contextualized in the globalization of trade in goods and services [2]. Currently, higher education institutions are one of the public services that provide educational services to the society, face many challenges such as high levels of competition, increased costs, and scarce state resources [3].

In the past, Central European Universities have faced many similar challenges, such as financial factors that influence university development [4]. Financial factors, especially higher education income, are important factors in achieving success in improving the performance and competitiveness of universities. Sources of income from state universities (PTN) funds come

from the government and the community [5, 6]. Hagen [7] reports a similar situation in the United Kingdom where the university sector is under increasing pressure to expand their non-publicly funded activities to help offset a “cash crisis” in university funding. Based on this situation, numerous countries and regions have been increasingly focused on developing the concept of autonomy as part of a transformation of higher education governance into autonomy or self-governance [8].

According to Law No. 12 of 2012, mentioned that higher education institutions in Indonesia have the autonomy to manage their own institutions within the Tridharma ideology. The autonomy of university management is carried out based on these principles: accountability, transparency, non-profit aims, quality assurance and, effectiveness and efficiency [9]. Furthermore, funding Legal Entity State University can be sourced from the state budget for revenues and expenditures and in addition to the state budget (Indonesian Budget). Thus, the Legal Entity State University (PTN BH) funding sources are obtained from (a) the budget and state expenditure budget in the form of legal entity State University funding assistance and (b) in addition to the State’s income and expenditure budget. The two funding sources of the Legal Entity State University are State University (PTN) receipts of Legal Entities that are managed autonomously and are not non-tax State revenues [6].

Several previous studies related to risk management, especially in Legal Entity State Universities (PTN BH) conducted by researchers [10-12] show that risk management structures, processes and procedures indispensable as part of the internal control system. Every organization needs to carefully study the performance of assets and asset management systems on a regular and regular basis, these activities aim to ensure that asset management runs well in accordance with service needs. Internal control of fixed assets in a public sector organization is an important part and must be the focus of supervision, supervision in internal control is an efficient way to ensure management policies in maintaining assets [3].

Furthermore, Nocco and Stulz [13] assert that organizations that successfully implement effective risk management will have a competitive advantage in the long term, so that they can protect stakeholders from getting their respective rights. A well-designed risk management system will ensure that all risky activities are carefully evaluated by responsible managers and workers. Risk management was created to help organizations face various uncertainties in achieving organizational performance targeted by stakeholders. The success of management in achieving performance is determined by the success of management in managing the risks inherent in every business activity.

In the transformation of Universitas Brawijaya into Legal Entity State University, Universitas Brawijaya has an awareness for the importance of risk management. With its status as Legal Entity State University, Universitas Brawijaya has broader autonomy in terms of managing the organization, including the budget. The Vocational Education Program as one of the elements of implementing education at Universitas Brawijaya is deemed necessary to design a risk management system towards Legal Entity State University. The process starts from the identification of risks, impacts and obstacles to the achievement of Legal Entity State University goals and objectives. Based on the background described previously, this study aims to design a risk management system in the Vocational Education Program of Universitas Brawijaya so that it can be used as a reference for managing risks that may arise when becoming a Legal Entity State University.

## II. LITERATURE REVIEW

The new paradigm of risk management has become broader and more diversified. Such influence has impacted university structure, strategies, key values, missions, and overall operation at differing change levels. The influencing force encompasses the arrival of various stakeholders and the relationship dynamics (contractual obligation) between stakeholders and university governance. Autonomy in higher education is not an instant process, but a part of a process through changes in the traditions and traditional practices deeply rooted within the higher education institution's interior. Every form of autonomy depends on the context, which will differ for every higher education institution. This context may take the type of a nationally applied system with respect to law, budget, education, community, or even politics. It may also originate from regional or international pressures [8].

The Organization for Economic Co-operation and Development (OECD) has put considerable effort into analyzing and developing new transition models and in reforming educational and employment policies. In the secondary vocational sector, the main concerns have been rising youth unemployment and the threat of marginalization facing early school leavers and drop-outs [14]. In response of this situation, The OECD countries have rationally concluded that as the regional knowledge-base, universities have the quality and expertise to create and disseminate knowledge for economic development; but they have not acknowledged that

the partnership/alliance process is an extremely high risk strategy at the level of implementation, with an overwhelming number of research studies on strategic alliances reporting a third to two-thirds failure rate. Universities are now challenged to respond to economic pressures of globalization in a similar way to large corporations by freeing themselves from uni-dimensional, hierarchical structures which are unresponsive and non- interactive with environmental change [7].

Sattu et al., reports that State University (PTN) in Indonesia have not been managed effectively, this is due to problems in the financial management of State University (PTN) [15]. The concept of Legal Entity State University (PTN-BH) is a solution for State University in Indonesia, with this concept, universities get higher autonomy at the academic and non-levels. In order to acquire the necessary status as autonomous institute, Koning and Maassen [16] states that with a Legal Entity the higher education institutions must follow certain steps and comply with a set of criteria, such as cooperation with peer organizations, institutional capacity building, good governance, human resource development and quality assurance, and thus, the road to autonomy, at least for the Eastern Indonesian institutions, appears to be quite long.

The implementation of higher education autonomy can be given selectively based on performance evaluations by the Minister to State University (PTN) by implementing a pattern of financial management of public service bodies or establishing state universities for legal entities to produce quality higher education. State universities that apply the pattern of financial management of public service bodies have management and management authority in accordance with the provisions of legislation, while legal entities state universities that have separated state assets except land, governance and decision making independently, units that implement the function of accountability and transparency, the right to manage funds independently, the authority to appoint and dismiss lecturers and education staff themselves, the authority to establish business entities and develop endowments and the authority to open, organize and close study programs [6].

As defined by Uher and Toakley [17], Risk management is designed as a procedure to control the level of risk and to mitigate its effects. In response to the type of situation above, risk management can play an important role in controlling the level of risks and mitigating their effects. While, in the Indonesian context according to Mukhlis and Supriyadi [12] the risk management process applied at the Ministry of Finance was adopted from the Australia/New Zealand (AS/NZS) ISO 31000:2018 framework, which is a risk management standard issued by Australia and New Zealand, containing seven elements: (1) Context setting; (2) Risk identification; (3) Risk analysis; (4) Risk evaluation; (5) Risk management; (6) Monitoring and review; (8) Communication and consultation.

## III. RESEARCH METHODS

The research method used in this research is qualitative with a case study on Vocational Education Program of

Universitas Brawijaya. The data collection method used in this research is to use primary data and secondary data. Primary data in the form of interviews with structural officials, namely (1) Director of Vocational Education, (2) Deputy Director of General Administration and Finance for Vocational Education, (3) Head of Vocational Education Finance, (4) Head of Consultation and Development of the Internal Audit Office. The sample was selected by considering the representation of elements of leadership, academic implementers, administration and development. Secondary data is in the form of applicable laws and regulations, regulations or decrees of the Rector of Universitas Brawijaya, circulars, and other documents relevant to risk management information. Data analysis in this study used the Miles and Huberman model. The purpose of the analysis model is to identify the elements needed to develop risk management at Universitas Brawijaya. The analysis stages consist of (1) data collection, (2) data reduction, (3) data presentation, and (4) conclusion or verification.

#### IV. RESULTS AND DISCUSSION

##### A. Universitas Brawijaya Vocational Education Profile

Vocational education is higher education aimed at practical interests starting from DI, D-II, D-III, Applied Bachelors, Applied Masters and Applied Doctors whose function is to develop students to have certain applied skills jobs through vocational programs in order to achieve national education goals. Vocational education is education that directs students to develop applied skills, adapt to certain fields of work and can create job opportunities. Vocational education adheres to an open system (multi-entry-exit system) and multi-meaning (oriented to culture, empowerment, character building, and personality) as well as various life skills. Vocational education is oriented towards work skills in accordance with the development of applied science and technology and in accordance with the demands of employment needs. Vocational education is applied skills education held at universities in the form of academies, polytechnics, high schools, institutes and The form of the implementation of vocational education consists of Diploma 1, Diploma 2, Diploma 3, and Diploma 4. National standards of vocational education are developed based on national and/or international competency standards.

##### B. Application of Risk Management at Universitas Brawijaya

Based on the results of the study, it was found that risk management in UB's vocational education has been running in a structured manner, although some previously planned work programs could not be carried out due to the case of the COVID-19 pandemic. These can be seen from the awareness of risk in decision making and system design. Vocational education as part of the work unit at Universitas Brawijaya during the COVID-19 pandemic has made adjustments in the risk management process set by the university. These facts also supported the study by Wang et al., that reports Chinese universities have played a positive role in the prevention and control of the epidemic situation as risk management [18].

These risks and emergency problems including issues related to medical security, emergency research, professional assistance, positive communication, and hierarchical information-based teaching.

##### C. UB's Vocational Education Risk Management System Design

The Risk Management System that should be designed by Vocational Education Program of Universitas Brawijaya to adapt to the COVID-19 pandemic includes:

1) *Risk management organizational structure:* The risk management structure of the Vocational Education Program, Universitas Brawijaya adopts several regulations including: Government Regulation Number 60 of 2008 concerning Government Internal Control System (State Gazette of the Republic of Indonesia of 2008 Number 127); Regulation of the Minister of Education and Culture of the Republic of Indonesia Number 66 of 2015 concerning Risk Management within the Ministry of Education and Culture; Rector's Regulation of Universitas Brawijaya Number 57 of 2018 concerning OTK UB; and the Rector's Regulation of Universitas Brawijaya Number 8 of 2020 concerning Risk Management Policy at Universitas Brawijaya. The regulations above, shows that an integral component of good management and decision making at every level in an organization. Berg [19] argues that risk management is concerned with making decisions that contribute to the achievement of the goals of an organization by implementing risk management at the level of individual activities and functional areas. The application of risk management at Vocational Education Program of Universitas Brawijaya can provide the following benefits:

- Provide information to stakeholders that the organization has implemented best practices in organizational management (good governance) so that it can provide adequate assurance from a risk perspective to stakeholders that the objectives of the organization can be achieved.
- Providing strategic alternatives in anticipating the possibility of risk occurrence, as well as mitigating risk at an acceptable level (risk appetite).
- Make adequate reserves to anticipate measurable risks so that the potential for failure of relatively larger organizational goals can be avoided.
- Calculating and measuring the amount of risk exposure and determining the allocation of sources of funds as well as a more precise risk limit.
- Providing guarantees for organizational management that complies with regulations, effective and efficient management of state finances, and accountable state finances.

2) *Risk management process*: The implementation of Risk Management is an integral part of the implementation of the higher education management system, where the Risk Management process is one of the steps that can be taken to create continuous improvement, which is often associated with the decision-making process within the company. The series of Risk Management processes can be applied at all structural levels, from rectorate to study programs, because they contribute to effectiveness and efficiency, consistency of results, comparability and competitiveness. The implementation of Good University Governance which refers to the change in the status of higher education management to Legal Entity State University (PTN BH) is carried out based on the principles of accountability, transparency, non-profit, quality assurance, and effectiveness and efficiency. Meanwhile, based on ISO 31000:2018, the risk management of the Vocational Education Program, Universitas Brawijaya in its implementation must pay attention to several basic principle criteria that have been set so that it can run effectively, including:

- Risk management must be integrated. Risk management is an integral part of all company business processes so that it becomes a unified whole.
- Risk management is structured and comprehensive. A structured and comprehensive approach to risk management contributes to consistent and comparable results.
- Risk management can be customized. The risk management framework and processes are adapted and proportionate to the external and internal context of the organization in relation to the objectives.
- Risk management is inclusive. Stakeholder engagement that provides views and knowledge and perceptions. Take it as a material for consideration and input. This condition results in increased awareness in implementing and managing risks.
- Risk management is dynamic. Risk is dynamic so that risk can arise, change, or retire when the external and internal context of the organization changes. Risk management anticipates, detects, and responds to these changes in an effective and timely manner.
- Risk management can provide the best information. Risk management is based on historical and current information and data and future expectations. Risk management explicitly considers any limitations and uncertainties associated with information and data. The information available must be timely, clear and relevant to stakeholders.
- Risk management is influenced by human and cultural factors. Human behavior and culture significantly influence all aspects of risk management at every level and stage. This means that in implementing risk

management in the company, human and cultural factors are important concerns and considerations.

- Risk management is a continuous improvement. Risk management continues to be improved through learning and experience because risk is dynamic. Risk management not only improves business processes, but also improves company performance.

3) *Risk management procedure*: The planning of the Risk Management framework for the Vocational Education Program, Universitas Brawijaya includes understanding the organization and its context, establishing Risk Management policies, establishing Risk Management accountability, integrating Risk Management into the organization's business processes, allocating Risk Management resources, and establishing internal and external communication mechanisms. After planning the framework, then the implementation of the Risk Management process is carried out. In implementing Risk Management, it is necessary to evaluate the Risk Management framework. After that, the Risk Management framework needs to be continuously improved to facilitate changes that occur in the internal and external context of the organization. These processes are then repeated to ensure there is a Risk Management framework that is undergoing continuous improvement and can result in a reliable implementation of Risk Management. It can also be explained by the scheme below (Fig. 1).



Fig. 1. The risk management framework.

The Vocational Education Program, Universitas Brawijaya applies a risk management framework with several stages. First, develop an appropriate plan including time and resources. Second, identify where, when, and how the various types of decisions are made at the corporate level and by whom. Third, modify the current decision-making process if necessary. Finally, ensure that the university's arrangements for managing risk are clearly understood and practiced. The university regularly monitors and adjusts the risk management framework to cope with changes that occur in the external and internal environment so that the organization can continue to increase its value, by continuously improving the suitability, adequacy

and effectiveness of the risk management framework and the integrated risk management process.

The process carried out at Vocational Education Program of Universitas Brawijaya in the application of risk management takes place continuously in a cycle which is described in eight stages that must be managed properly in order to help the institution to evaluate its strengths and weaknesses, so that the company can survive and thrive in various ways. The situations and conditions and become an organization that has strong business processes so that it can compete with other companies. The implementation of the risk management process at Vocational Education Program of Universitas Brawijaya is presented as follows (Fig. 2):

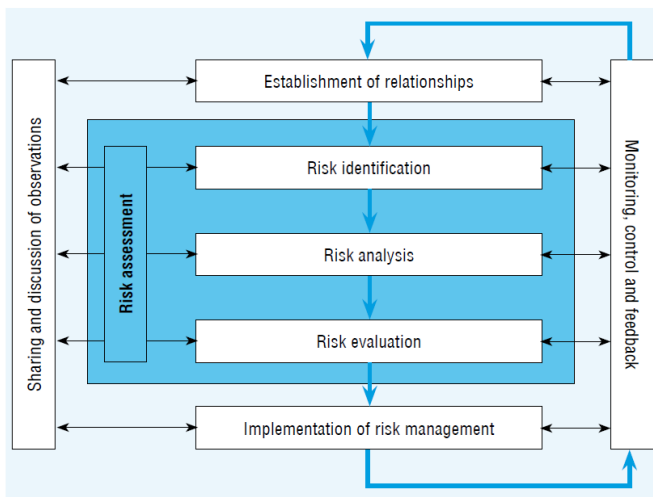


Fig. 2. The risk management process.

Based on the picture above, an important consideration at each step of the risk management process is communication and consultation. In the early stages of the process it is very important to develop a communication plan with both internal and external stakeholders. The communication plan should address both the issues concerning the risk and the process for managing it. Effective internal and external communication is very important to ensure that those responsible for implementing Risk Management and other interested parties understand the basis for making decisions and why certain actions are needed. As part of the risk management process, Nasution et al., states that the organizational aspect must be concerns the organizational structure and governance model [8]. The organizational structure includes academic units like study program, department, faculty, and school, administrative and financial units, facility management (means and infrastructure), institutional and student development units, among others.

As stated by Demidenko and McNutt [20] that risk management is able to monitor the achievement of the company's main goals in an ethical way to maximize shareholder value and balance the interests of stakeholders. In addition, risk management also provides protection to stakeholders against the adverse effects of risk through risk

treatment. Therefore, risk management is an important part of the business process, especially at the planning stage. The choice of method and choice of strategy in risk management is aligned with several aspects, so that optimum success is achieved. Risk management should be a continuous and continuous process within the organization.

In response, the communication and consultation on risk management at Vocational Education Program of Universitas Brawijaya is participatory, which involves all elements of interested parties. This is to ensure that the results of risk management are in accordance with the real conditions in the field/faced by the risk owner. In addition, perceptions of risk may differ due to different assumptions and concepts as well as the needs, issues and concerns of stakeholders in relation to the risks or issues being discussed. Stakeholders' perceptions and reasons for the acceptability of a risk that has a significant impact on the decisions taken are identified and documented.

The implementation of risk management is also inseparable from the role of supporting factors, including: (1) The applicable laws and regulations that require implementation in government agencies. (2) Leadership commitment. The leadership of Universitas Brawijaya (Rector) has a high commitment to be able to implement risk management at Universitas Brawijaya. This is to be able to provide assurance that organizational goals can be achieved in accordance with what has been set. (3) Risk aware. The risk aware culture has been integrated into the management system at Universitas Brawijaya. In addition, the study by Kivinen and Ahola [14] reports that this responsibility of risk management might make more sense by seriously concentrating in developing the university's core function, research and learning. In this regard, continuous improvement and sustainability should be maintained. In order to ensure the continuity of education. Universities need great efforts to find and generate financial resources to finance all their activities. It follows that universities will need to be transparent and to provide public accountability [21].

## V. CONCLUSION

The results of the study show that the Vocational Education program of Universitas Brawijaya has met the criteria by establishing policies, guidelines, procedures, and implementation instructions for risk management. The right paradigm of risk management and a culture of individuals who are aware of risk need to be built to realize the success of risk management at Vocational Education program of Universitas Brawijaya. The risk owner's participation in the process of risk identification, risk analysis and evaluation affects the success of risk management implementation at Universitas Brawijaya. The effectiveness of risk management is highly dependent on the function of the risk management unit in carrying out its duties and functions in implementing risk management at Universitas Brawijaya.

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