
IPB University's Strategic Capabilities Dealing with Environmental Turbulence

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Abstract

The turbulent environmental conditions in the education industry urgently require a flexible strategic response and strong organizational capabilities. Universities cannot be left behind with their practices which tend to be planned, slow and bureaucratic. The purposes of this study include analyzing the turbulence level of the higher education environment, assessing the condition of IPB University's organizational capabilities, and designing IPB University's strategy based on the value of organizational capability and the level of environmental turbulence. The method used in this study is a qualitative method and sample selection is done by purposive sampling method. The study results show that progressive turbulence in the higher education environment demands service improvements to anticipate customer developments. The capability of IPB University must be continuously encouraged to fit the level of environmental turbulence to gain competitive advantage.

Keywords: strategic fit, higher education, environmental turbulence.

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Abstrak

Kondisi lingkungan yang bergejolak di industri pendidikan sangat membutuhkan respons strategis yang fleksibel dan kemampuan organisasi yang kuat. Perguruan tinggi tidak boleh ketinggalan dengan praktiknya yang cenderung terencana, lambat dan birokratis. Tujuan penelitian ini antara lain menganalisis tingkat turbulensi lingkungan pendidikan tinggi, menilai kondisi kapabilitas organisasi IPB University, dan merancang strategi IPB University berdasarkan nilai kapabilitas organisasi dan tingkat turbulensi lingkungan. Metode yang digunakan dalam penelitian ini adalah metode kualitatif dan pemilihan sampel dilakukan dengan metode purposive sampling. Hasil studi menunjukkan bahwa turbulensi progresif di lingkungan pendidikan tinggi menuntut peningkatan layanan untuk mengantisipasi perkembangan pelanggan. Kemampuan IPB University harus terus didorong agar sesuai dengan tingkat turbulensi lingkungan untuk mendapatkan keunggulan kompetitif.

Kata Kunci: *Kesesuaian strategis, pendidikan tinggi, turbulensi lingkungan.*

1. Introduction

Education is a process of developing intellectual abilities, shaping the mindset, attitudes and behavior of individuals that support the strengthening of the nation's competitiveness. The role of higher education is the key to the progress and competitiveness of the nation through the process of education, research, innovation development (Deem et al., 2008). Furthermore, Ramoniene and Lanskoronskis (2011) argue that competition between countries is highly dependent on the quality of education to produce quality and skilled human resources. However, the important role of higher education is also accompanied by many challenges and problems both from the internal and external

environment, such as budget, reputation, innovation, policy change, organizational management, collaboration, and competition (Akram & Hilman, 2017). Khurana (2007) stated that higher education cannot be separated from the dynamics of its environment, including the industrial world. Therefore, higher education should be encouraged to adjust its internal resources and capabilities to be compatible with the extremely turbulence and uncertain external environment. Bokor (2012) stated that higher education organizations should be able to form new business models that are dynamic, modern and follow future needs.

Based on data from the Directorate General of Higher Education (2020), Indonesia has 3,405 public and private universities spread

across various provinces. Of the total universities, only 99 universities are included in the A and Superior accreditation categories, and the remaining 2,946 are still accredited under it (B, C, Very Good and Good). The variety of quality and scale of universities makes policy management at the central level must be able to accommodate all variations.

IPB University is one of the providers of higher education in Indonesia located in Bogor. IPB as one of the universities that is considered good and occupies the top-ranking position strives to continue to adapt to the environment as well as become a trend setter for the world of education and contribute to the progress of the nation (satria, 2019). IPB University emphasizes the need for survival and leading in this uncertain era by strengthening knowledge, new capabilities (future practice) and synergizing with many parties. To be competitive, IPB continues to improve and strengthen organizational capabilities both strategically and operationally by continuing to innovate. This is in line with (Barnett, 2000) universities are required to be flexible, adaptable, independent, and closer to the world of work in order to be able to compete in this very complex environment. (Institut Pertanian Bogor, 2017) in the IPB Long-Term Plan designed the IPB Future strategy as a form of IPB transformation through stages from a research-based university to a techno-socio-entrepreneurial university in 2045. To realize

IPB Future, challenges at national and global scopes must be managed properly in IPB strategic planning.

These challenges include coming from the industrial world as a collaboration partner as well as users who want IPB University to be able to produce graduates who are creative, innovative, have entrepreneurial character, while meeting the demands of the dynamic professional needs of the world of work. The industrial world also hopes that many innovations born from universities can be adopted to support industrial progress, increase efficiency, and open many new tested alternatives (Muhson et al., 2012).

In addition to challenges coming from industry, from the side of policy makers at the national level (Kemenristek DIKTI) with various policies and the latest innovations also color the strategic and operational journey of IPB University. Among them are the revision of Law No. 12 of 2012 concerning Higher Education, the Independent Learning Campus Independent Policy (MBKM), the target of Indonesian universities to be included in the Top 500 World Class Universities, increasing publications in internationally reputable journals, and various other policy derivatives (Ministry of Education and Culture 2020). The dynamics of policies and directions from Kemeristek DIKTI must be responded carefully by IPB and other universities.

On the other hand, micro and macro problems related to economic, social, information technology developments, environment and law both directly and indirectly also color the steps of universities in determining their strategies. Other higher education is required to advance the nation's competitiveness, as well as being part of the solution and having a positive impact on society and nature (Kementerian Pendidikan dan Kebudayaan RI, 2020)

In the realm of the education industry, competition between universities, both public and private universities, is also increasingly dynamic. The competition is shown in various rankings, national and international achievements in various categories, as well as the search for the best input in education and research. Although for some of this period it can be seen that at least the top 5 universities in various rankings are occupied by universities that are more or less the same as the order change, but some other universities are also trying hard to seize positions. In the field of quality assurance, international accreditation and collaboration with prestigious world universities are also targets of many universities in Indonesia. Inbound and outbound data of foreign lecturers and students to various Indonesian universities and universities around the world increasingly show a significant increase, and even become

one of the separate assessments by the Ministry of Education and Culture in the category of Superior Performance Index (IKU). As organizations that have a vision to be competitive, various should be more responsive to challenges and situations (Welsh, 2009).

Such turbulent environmental conditions are often not accompanied by flexible strategic responses and strong organizational capabilities. Thus, the organization becomes left behind with its practices that tend to be planned, slow and bureaucratic. If IPB University in the IPB 2045 CPR targets its organization to continue to excel and strive to become a trend setter in techno-socio-entrepreneurial university, IPB University should have qualified organizational capabilities and implement responsive strategies. As stated by (Ansoff & McDonnell, 1990) related to strategic fit where competitive organizations must be able to adjust organizational capabilities to the environment. IPB University can no longer just wait for direction or follow the direction of the development of the education industry in general.

Based on the background and problems above, the objectives of this study include analyze the level of environmental turbulence faced by IPB University, assess the condition of IPB University's organizational capabilities,

and designing IPB University strategies based on the value of organizational capabilities and the level of environmental turbulence.

2. Theoretical Framework

Strategy is a consistent and coherent flow of actions implemented by an organization to move towards its vision (Burnes, 2009). The concept of strategy is not only related to business organizations, but universities as providers of education, research and community service are also inseparable from various opportunities and challenges facing changes and complexities closely related to strategy. (Inayatullah & Gidley, 2000) suggest that in the future universities compete fiercely because of the influence of globalization, multiculturalism, the internet, and politics. Higher education is required to be flexible, adaptable, independent and closer to the world of work in order to be able to compete in this very complex environment (Barnett, 2000). Strategic management as a concept related to the time factor involves a continuous process in achieving an organizational goal in accordance with the environmental conditions faced. (Teece, 1997) stated that the strategic management process is a full set of commitments, decisions and actions needed by an organization to achieve strategic competitiveness and get above-average profits.

Dynamic capability according to (Hitt & Hoskisson, 2017) is defined as the alignment of

internal resources and capabilities with the changing external environment by continuously increasing internal resources and capabilities by sensing, seizing and transforming. Sensing is said to be a component for sensing market opportunities and technology, sensing aims to know the dynamic conditions of the industrial environment, technological opportunities and internal environmental conditions of the company. Seizing is a component of dynamically determining strategic decisions and carrying out dynamic execution based on sensing results. Transforming is a component of combining, reconfiguring and protecting assets in the company's organizational processes.

Strategy management is a systematic approach to managing strategic change consisting of:

1. Company positioning through strategic and capability planning.
2. Real-time strategic response through problem management.
3. Systematic management of resistance during strategic implementation (Ansoff, 2007).

Figure 1 is a framework designed by (Ansoff, 2007) in managing organizational adaptation to the environment. Organizations will be successful when the environment, organizational responses, and organizational

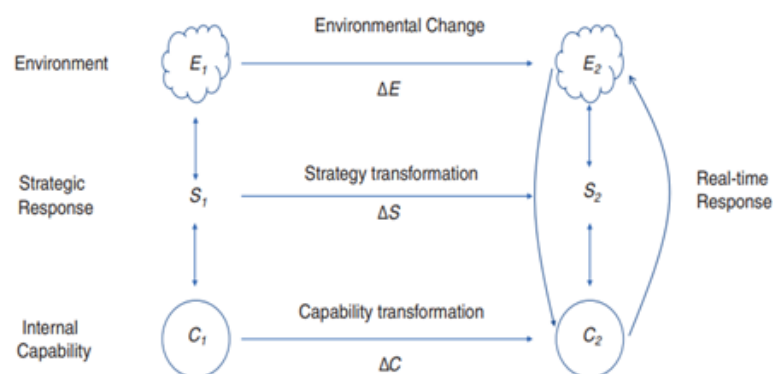


Figure 1. Management of the organization's adaptation to the environment

capabilities match each other. This is in line with the opinion of (Ansoff & McDonnell, 1990) who stated that the success of the company's strategy in achieving its goals is influenced by how well the organization responds and takes action on environmental changes and how well the organization identifies and develops the right organizational capabilities in the strategy set. (Bangun, 2011) emphasized that organizational capabilities are essentially capabilities that exist in the company both tangible and intangible which become a force to face change and competition and make the organization continue to grow (Ansoff & McDonnell, 1990) identified 4 domain factors that make up organizational capabilities, namely the working climate of the organization, the manager or individual who leads the organization, management competence, and management capacity.

3. Research Method

The method used in this study is qualitative

method and sample selection is done by purposive sampling method. There were five respondents, selected to represent internally, namely the internal component of IPB University (1 person), external respondents from the Ministry of Research, Technology and Higher Education (1 person) and representing competitors (2 A-accredited university managers in Jakarta) and business practitioners (1 person). Strategic capability measurement is based on a framework developed by Ansoff. The questionnaire as a discussion guide was developed to measure environmental turbulence, and organizational capabilities of IPB University. The scope of research focuses on the strategic capabilities of IPB University and the analysis of the turbulence level of the higher education industry and designing strategies. In determining the level of turbulence, this study looks at narrower industries, namely universities that have A accreditation and are superior only (both public and private status). This is done considering

Table 1. Higher Education Industry Turbulence Level

No	Attribute	Turbulence Level				
		1	2	3	4	5
1	There are differences in marketing strategies	None	Some but low	Some and medium	There is a variety of marketing	Revolutionary
2	The frequency of new marketing strategies by business people in the industry	None	Some but low	Some and medium frequency	Some and high frequency	Very fast
3	Demand sector in capital	None	Some but weak	Medium	High	Very High
4	Barrier to entry in industry	Very High	High	medium	low	None
5	Demand / Industrial capacity	=1	>1	-1	<1	<=1
6	There is "pressure" from consumers	None	Some but weak	There are and strong	Demanding	Threatening
7	There is "pressure" from the government	None	Some but weak	There are and strong	Demanding	Threatening
8	There is "pressure" from the environmentalist	None	Some but weak	There are and strong	Demanding	Threatening
9	The rate of technological change	Very Slow	Slow	Sedang	Cepat	Discontinuous
10	Diversity of technological competition levels	None	None	None	Sometime	Sometime
11	The presence of product differentiation	No	Little	Medium	High	Highly differentiated
12	Frequency of new products in the industry	None	Occasional	Medium	Sering/Tinggi	High
13	Success marketing factors	Control of the market	Market Share Domination	Influenced by Other Factors	Product image	Miracle product
14	Success factor innovation	Control of the market	Market Share Domination	Image differentiation	Best product at least cost	Miracle product
Environmental Turbulence Level				2,86-3,57		

that currently the range of quality of the higher education industry in Indonesia is very diverse.

4. Result, Discussion, and Managerial Implication

4.1 Environmental Turbulence Level

Based on the results of discussions with respondents, the level of environmental turbulence for the higher education industry faced by IPB University is categorized into

levels 2.86-3.57. This level of turbulence is considered higher when compared to the level of turbulence in the education industry in general. As mentioned in the scope, this level is made narrower or does not cover all universities in Indonesia, but only in the category of strategic groups with limits on higher education in Indonesia with A or superior accreditation.

As for if based on Build (2011) level 2 is

characterized by the environment changing slowly and gradually, while level 3 is said to progressively improve historical services / products to anticipate the development of customer needs. Industry shapes and influences customer desires. Table 1 shows the results of the assessment of the level of industrial environmental turbulence faced by IPB University.

Based on the results of the discussion, several important points related to the level of environmental turbulence can be recorded as follows:

1. Higher education at A accreditation and superior (both public and private) is considered to have excellent quality, so it is the main choice of prospective students and collaboration *partners* from *stakeholders*. Universities in this category continue to compete to get as many inputs as possible (students, funding, human resources, cooperation opportunities) and marketing through several media. When viewed in general, the marketing strategies used are more or less the same and in the medium category in frequency. In the future, if international universities are given the opportunity to enter the higher education market in Indonesia, of course, a variety of new marketing strategies will be found.
2. Capital is considered very important for the development and operational financing of higher education. The funding provided by the government is certainly not fully sufficient for the implementation of the tridharma of higher education. For this reason, through various efforts universities determine financing through community funding mechanisms, seek grants, increase collaboration, and develop business units / businesses relevant to universities.
3. The government sets very strict rules regarding the establishment, change, dissolution of state universities and the establishment, change and revocation of private university licenses (Minister of Education and Culture Regulation Number 07 of 2020). In addition, accreditation factors from study programs, faculties to universities also have long stages and processes. Therefore, the *barrier to entry* in this sector is currently very high. However, there is a discourse that foreign universities are allowed to open branches in Indonesia and the existence of *full online* lectures from

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- internationally renowned universities, open to easing but with a *barrier to entry* that remains high.
4. *Demand in universities*, especially accredited A, is considered to exceed the capacity owned (>1), in the future it will allow a shift in industrial capacity to be greater because of foreign universities that open *online* or even *offline* classes in Indonesia.
 5. *Pressure* on universities is grouped into three, namely from consumers (students and industry), government and environmental groups. From the consumer side (students and industry), the pressure exerted is there and strong. Students and industry emphasize the excellent quality of processes, outputs, *outcomes* and *impacts*. In terms of environmentalists, of course, superior universities are expected to be a driver of finding solutions to problems and preserving the environment through education, research, service and relevant innovations. From the government, the pressure given to universities with A accreditation is very demanding. The government demands that A-accreditation category universities can continue to be encouraged to enter the top 500 *world class universities*, and achieve a high superior performance index.
 6. Technological changes in universities continue to run at a moderate pace, especially in the pillars of education and community service. For research, technology runs fast, but the number of technologies that later become truly appropriate for society and can be commercialized is still limited. In terms of technological diversity, it can be said to exist but relatively small.
 7. Regarding product differentiation, when viewed on the three pillars of the tridharma, of course, the pillars of education, both degree and non-degree, are relatively the same. But for research and community service, it can be said to be quite diverse, depending on the *core competency* of the university.
 8. For the success attribute of marketing factors, among A accreditation universities *image* products dominate the most. Each university already has an inherent *image*, for example, IPB as an agricultural campus, ITB technology campus, etc. *That image* then moves
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potential customers (prospective students and partners) to choose universities.

9. For the innovation factor, so far it is still dominated by market share. Large campuses certainly have a large funding allocation in carrying out many innovations, as well as having many opportunities offered by the government or foreign parties through special schemes.

4.2 Organizational Capability Profile

Organizational capabilities become the basic capital for organizations to use, integrate, reconfigure, align and create change in the environment (Akram & Hilman, 2017) The capability of the organization according to (Ansoff & McDonnell, 1990) can be seen from the side of managers, management climate, management competence, and management capacity.

4.3 Climate Management

In diagnosing organizational capability, (Ansoff & McDonnell, 1990) emphasized behavior towards change, risk, time orientation, action perspective, *change trigger*, initiative, power structure, and success model. Based on the results of the climate discussion and the type of capability of IPB University if it is associated with IPB *Future*, the management climate of IPB University should

be directed closer to *strategic* or even flexible. When compared with the level of environmental turbulence which is at the highest point of 3.57, the current management climate of IPB University is still below 3.25. Table 2 shows a comparison of IPB University's current and future management climate.

Some notes in discussions related to climate management include:

1. IPB *Future* is said to want to become a *trend setter* for the world of education, thus IPB University must encourage management to be more flexible in facing changes by innovating on all fronts. However, in practice, currently IPB University still bases its activities on less flexible planning. All activities are still based on Musrebang activities which are carried out once a year and if there are changes can be made in a predetermined period.
2. IPB *Future* is the transformation of IPB from a research-based university to a *techno-socio-entrepreneurial university* in 2045, which means that IPB must be able to apply entrepreneurial behavior that dares to take risks that have not been identified/familiar. However, IPB currently still tends to focus on

previously identified risks, this is reflected in its operational behavior. In terms of time orientation, it is also still visible that IPB still uses a planned time orientation. The basis is still on the annual planning and RPJ IPB in 2045.

3. The perspective of management action can be said to be more open to external parties both nationally and internationally. Management has been actively exploring with many parties by canvassing, collaborating with many international partners. IPB University has also started to do a lot of *exercises* related to its ideas before there is an issue of change. For example, before the establishment of the MBKM policy, IPB had long designed its independent learning curriculum through K2020, besides that IPB University's innovations also continued to be carried out in many ways. Original initiatives that emerged from the idealism of IPB University in the future must continue to be supported, although at this time it is still *scattered* in nature.
4. The successful model of being a *trend setter* is innovation. Currently, IPB is still on a long journey to this optimal point. According to (Kesting

& Parm Ulhøi, 2010) universities must be able to encourage innovation capabilities in three ways. First, through basic and applied research conducted in universities. Second, human resources who focus on Research and Development are qualified and trained to conduct innovative research. Third, universities also have innovative human resources for future industries to generate and implement new ideas and knowledge.

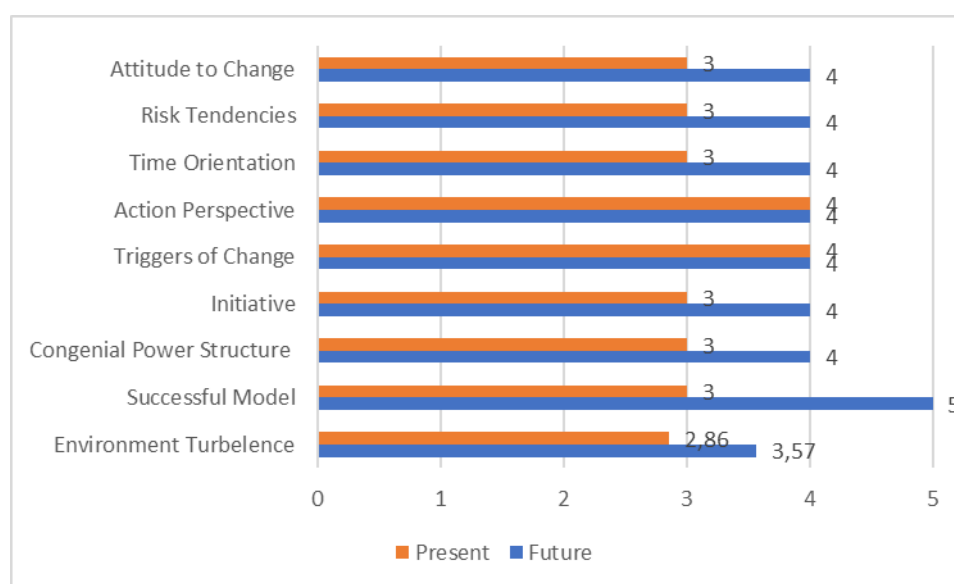
Further mapping between management climate and environmental turbulence can be seen in Figure 1. It is clear that currently IPB University still has a fairly good management climate because it slightly surpasses environmental turbulence with the lowest value. However, if there is high environmental turbulence in the environment, the management climate of IPB University must still be encouraged to be at least the same at the level of 3.57 or exceed it as the expected management climate in the future level 4,13.

4.4 Manager Profile

The manager profile in this case is categorized into two aspects, namely seeing behavior as an attribute that can be measured and adjusted to the accuracy of the manager profile with organizational turbulence.

Table 2. Climate Management Profile

Attribute	Custodial	Production	Marketing	Strategic	Flexible
Attitude to change	Not doing things, stable	Survive and see the situation to move forward	Plan for change	Love new things	Creating future
Risk tendencies	Avoid	Accept	Looking for identified risks	Looking for unfamiliar risk	Looking for new risks
Time orientation	Past	Now	A planned future	Predictable future	A new future
Action perspective	<i>Introverted</i>	<i>Introverted</i>	<i>Extroverted</i>	<i>Extroverted</i>	<i>Extroverted</i>
Change Triggers	Crisis	Unsatisfactory results	Opportunity and threats	Ongoing search for change	Ongoing search for change
Initiative	Force	Follow the conditions	'Run with the ball'	'Be self-starter'	'Be self-starter'
<i>Congenial' power structure</i>	<i>Centralized</i>	<i>Decentralized</i>	<i>Strong corporate office</i>	<i>Strong corporate office</i>	<i>Strong corporate office</i>
Successful model	<i>Stability</i>	<i>Efficient performance</i>	<i>Effective growth</i>	<i>Effective diversification</i>	<i>Innovation</i>
Management Climate Profile		Present	3,25	Future	4,13

**Figure 1.** Comparison of Environmental Turbulence and Climate Management

Source : Data processed

Manager profile attributes developed by (Ansoff & McDonnell, 1990) include manager mentality, orientation towards internal and external, orientation towards time, role model of leaders, behavior towards risk, view of work

authority, leadership style, decision-making process, knowledge required, as well as leadership skills associated with levels of turbulence. Based on the IPB Governance Organization document, managers or leaders

consist of the Rector, Vice Rector, Dean, Vice Dean, Head of Department, Head of Study Program, Head of Center and Head of Administration consisting of Faculty of Agriculture (A) to School of Business (K), Study Centers, and LPPM.

The results of discussions with respondents for the profile of managers at IPB are currently 3.2 while the ideal value of the future that should be exceeded is 4.2. Data related to manager profiles can be seen in Table 3 below. When viewed in Table 2, the word creative becomes 3 key things in the management of universities in the future, at least in the success model, mentality, and leadership style.

Compared with the results of the assessment of managers at IPB University, the level of environmental turbulence can be seen in Figure 2. It can be seen that in general the current manager profile at IPB University is *fit* with the lowest environmental turbulence, but still needs to not meet if the environmental turbulence is high.

4.5 Management Competency

In management competence, we can see a considerable gap between the ideal future competence for IPB University and existing conditions. To support IPB *Future*, at least management competencies are needed at the level of 4.11. Currently, the value of management competence has only reached 3.

This considerable gap is an important concern for IPB University. Table 2 shows that IPB in management competence still focuses on the production level, while ideally IPB University in the future will be in the strategic category.

When compared between management competence and environmental turbulence in Figure 3, we see that the average management competence is currently not *fit* with environmental turbulence. Some records that cause management competence is still not fit include:

1. The development of sciences at IPB University applies a transdisciplinary approach in presenting solutions. To enlarge its role in a real way, IPB needs to strengthen the relevance of the Tri dharma of Higher Education that it implements to become an agent of economic development by developing innovation and business. However, management competencies are currently not fully evenly distributed for all faculties/schools.
2. Strategically and operationally at IPB is still hierarchical even though it is not too rigid. In addition, in the development of management systems, information systems, rewards & incentives and

technology, the orientation is still *past performance* and financial limits.

3. Technology is one of the most important things in the development of higher education organizations. For this reason, future technological factors must be encouraged to encourage organizational capabilities in general.
4. Development of management competencies at IPB University related to skills and *problem-solving* processes, as well as the current organizational structure in accordance with future needs.

4.6 Management Capacity

Build (2011) relates management capacity to organizational hierarchy, the type of organizational capability that corresponds to the choice of organizational strategy. Management capacity at IPB University is seen in terms of corporate line, corporate staff, division *line*, *staff division* and functional contribution to strategic management. For IPB University, the current score obtained is 3.11 and the expected future value is 4.15.

Based on the data above, we can see the current position of IPB University's capabilities with the environmental turbulence faced. Figure 4 shows, in general, the organizational

capabilities of IPB University are currently still below the level of environmental turbulence. IPB capabilities must continue to be encouraged in order to reach optimal points in the future and be responsive to environmental turbulence that occurs. When viewed from its value, management competence has the smallest value (3.00) when compared to the manager profile, management capacity and management climate. There are three things that contribute to the low value of management competencies related to rewards & incentives, information systems and management systems.

4.7 Competitiveness Improvement Strategy

Damar (2018) emphasized that competitive organizations must be able to align the resources and capabilities of the organization with the external environment. This is important for IPB University to realize IPB Future as stated in the IPB Long Term Plan document. The following strategy is prepared by taking into account the level of turbulence and organizational capabilities that have not been optimally developed (currently still low) and the ideal value will be aimed at (ideal future):

1. In climate management, the two keywords closest to IPB *Future* are response to change by creating future and successful innovation models. Thus, IPB University needs

to encourage supporting attributes of climate management at the *strategic* or *flexible* level. Two strengths that currently stand out from IPB University in the climate management category are an extrovert perspective of action and the search for sustainable change.

2. The strategy of encouraging IPB University managers to be creative in mentality, leadership, and success models will make managers who are already good enough to face

environmental turbulence at this time become more oriented towards a more flexible manager profile and support IPB *Future* who want to be a *trend setter* in the education industry. The strengthening of managers who have performed well must be reflected in general managerial strength, which is currently still undervalued.

3. The initial step of strengthening management competence is focused on the weakest values that exist

Table 3. Manager Profile

Attribute	Custodial (1)	Production (2)	Marketing (3)	Strategic (4)	Flexible (5)
Mentality	Custodial	Production	Planning	Entrepreneurial	Creative
External vs internal orientation	Introverted	→	Balanced	→	Extroverted
Time orientation	Precedent	History	Extrapolated future	New futures	Invented futures
Success Model	Stability/repetition	Production efficiency	Balanced of internal efficiency and marketing responsiveness	Investment in most profitable available opportunities	Creativity
Tendency to risk	Reject	Accept familiar risks	Seek familiar risks	Seek unfamiliar risks	Seek novel risks
Managerial power in general	Strong	→	Moderate	→	Strong
Leadership Style	Political	Disciplinary/controllership	Inspirational/compromise	Charismatic 'pied piper'	Creative
Problem solving	Trial/error	Diagnostic	Optimization	Alternative search	Alternative creation
Knowledge	Internal politics	Internal operations	Traditional markets/competitors/technology	Global opportunities	Emerging environment
Leadership skills	Political custodial	Controllorship	Goal achievement	Entrepreneurial	Charismatic
Manager Profile		Now	3,2	Future	4,2

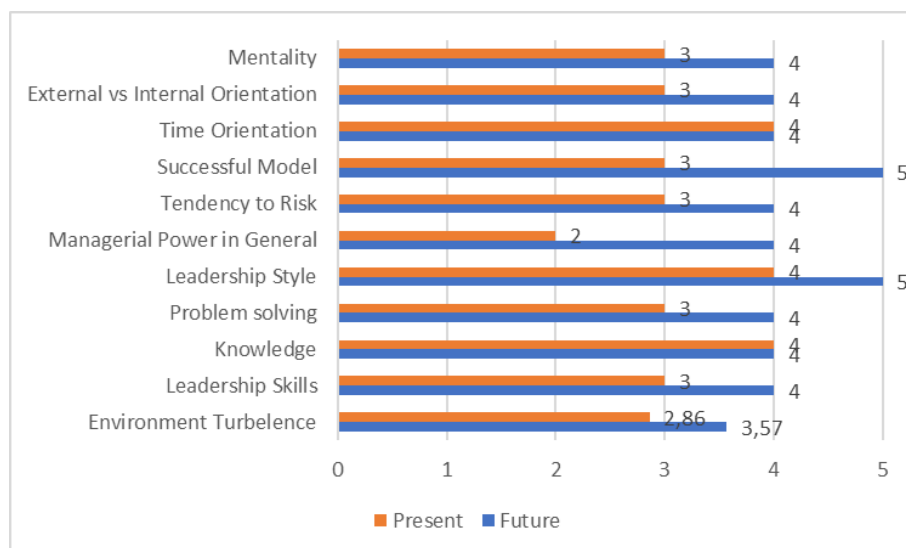


Figure 2. Comparison of Environmental Turbulence Levels with Manager Profile

Source: Data processed

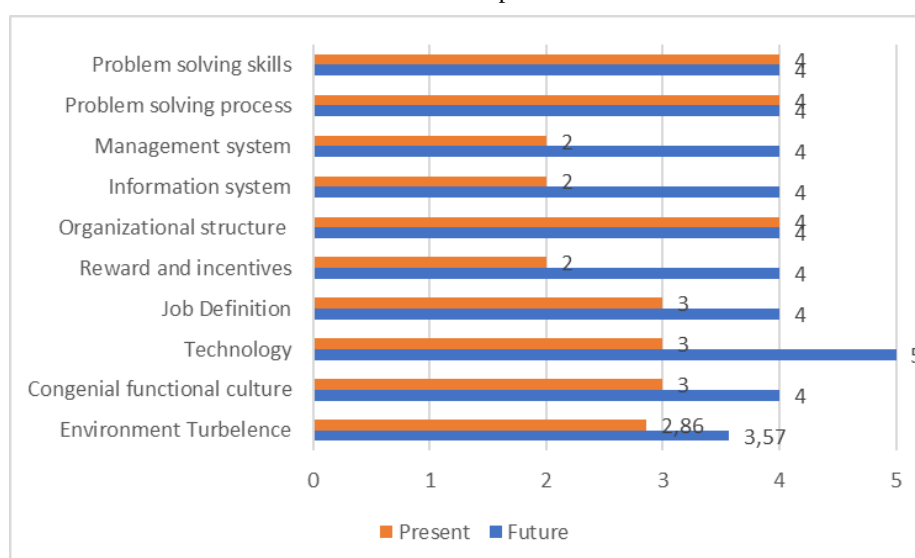


Figure 3. Comparison of Environmental Turbulence and Management Competence

Source: Data processes

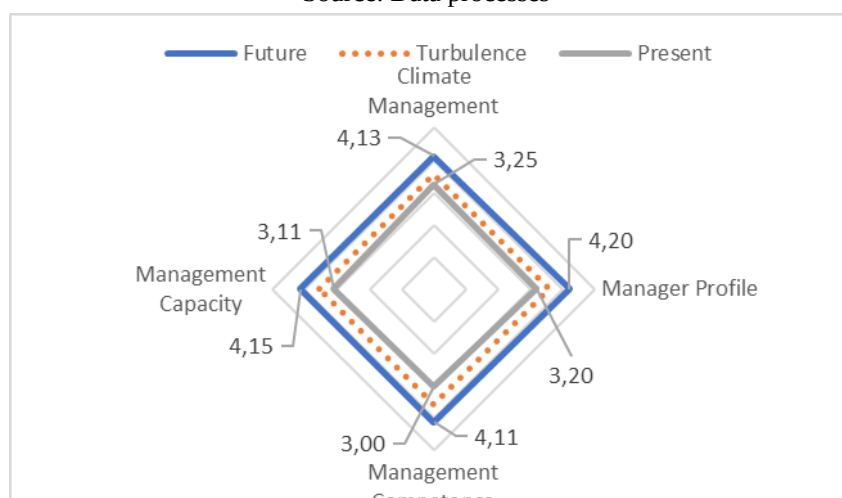


Figure 4. IPB University Capability Mapping and Environmental Turbulence

Source: Data processed

Table 4. Management Competency Profile

Atribut	Custodial (1)	Production (2)	Marketing (3)	Strategic (4)	Flexible (5)
Problem solving skills	Trial and error	Trial and error	Choice of best alternative	Choice of best alternative	Creativity
Problem solving process	Hierarchical, compartmentalized	Hierarchical, compartmentalized	Hierarchical firm-wide	Problem centered	Problem centered
Management system	Policy and procedure manuals	Financial control, capital budgeting	Long range planning	Strategic planning, strategic management	Strategic management, strategic issue analysis, crisis management
Information system	Internal precedents	Past performance	Extrapolative forecasting	Environmental surveillance	Environmental surveillance
Organizational structure	Functional	Functional	Divisional/multinational	Multi structure matrix	Multi structure matrix
Reward and incentives	Length of service	Past performance	Contribution of growth	Contribution to innovation	Contribution to innovation
Job definition	Specific and narrow	In terms of functional responsibility	In terms of functional responsibility	In terms of mission	In terms of missions
Technology	Work study, equipment repl, machine loading, etc	Ratio analysis, capital investment analysis	Forecasting operations optimization	What if, scenario, delphi, etc	Brainstorming
Congenial' functional culture	Operations and finance	Operations and finance	Marketing and corporate planning	Innovation, R&D new ventures	Innovation, R&D new ventures
Management Competencies		Now	3	Future	4,11

today namely rewards and incentives, information systems and management systems. The rewards and incentives given today need to be shifted to the point of view of contributing to innovation.

4. A matrix and flexible job placement strategy in the organizational hierarchy will support more flexible management capacity to support the

capabilities of the IPB organization in general. Matrix organization reflected in the combination of functional and divisional aspects can not only accommodate structural functions related to the main tasks, but also efficiently mobilize human resources to complete additional work programs that are cross-unit for the benefit of management.

5. Conclusions, Suggestions, and Limitations

The turbulence level of the higher education environment in the A (excellent) accreditation category has a value range of 2.86-3.57. This shows that the higher education industry is changing slowly and gradually towards progressive fulfillment of customer desires. The implication that must be faced by universities in the higher education industry is to adjust their organizational capabilities and strategies to fit with the turbulent conditions of the environment in order to continue to be competitive.

Based on the results of the analysis, IPB University's capability is not *yet fit* with environmental turbulence because it has a value lower than 3.57 both in terms of management capacity (3.11), management competence (3.00), manager profile (3.20) and management climate (3.25). IPB University's management competence has the lowest value among IPB University's organizational capabilities due to the contribution of low value from *rewards* and incentives, information systems and management systems. This requires IPB University to continue to improve its capabilities so that IPB University continues to have sustainable competitiveness.

The strategy to encourage IPB Future that aligns organizational capabilities with environmental turbulence includes encouraging the management climate to create

the future and innovation, encouraging managers at the creative level and strengthening management in general, improving rewards and incentives, information systems and management systems, and emphasizing matrix and flexible organizations in the hierarchy.

Thus, commitment is needed from the leadership and the entire IPB academic community to contribute positively to the implementation of the strategy. For further research, analysis can be carried out on various strategies that can be developed to increase the competitiveness of higher education in depth, based on university priorities.

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