

TRANSFORMATION MODEL OF ENTREPRENEURIAL UNIVERSITY: AN ETHNOGRAPHIC APPROACH

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Abstract

This study aims to develop a transformation model of the entrepreneurial university in Indonesia using an ethnographic approach. The research was conducted at five state universities with legal entity (PTN-BH) that have implemented institutional entrepreneurial initiatives. Data were collected through participant observation, in-depth interviews, and focus group discussions with key actors, including university leaders, lecturers, and business incubator managers. The findings reveal that the transformation process occurs in four key stages: initiation, experimentation, consolidation, and institutionalization. The success of this transformation is influenced by four main dimensions: strategic leadership, institutional structure, entrepreneurial culture, and actor dynamics. This study offers a theoretical contribution to understanding institutional change in developing countries and a practical framework for higher education policymakers. The ethnographic approach enables a deep exploration of the social and cultural dynamics underpinning institutional transformation in universities.

Keywords: Entrepreneurial University, Institutional Transformation, Ethnography, Higher Education, PTN-BH

1. Introduction

Universities worldwide face the challenge of enhancing their role beyond that of educational and research institutions to become catalysts for entrepreneurship, innovation, and economic development in the era of globalization and the knowledge-based economy. The entrepreneurial university concept has emerged as a solution to this problem (Etzkowitz et al., 2004; Guerrero et al., 2014). Universities no longer merely educate students and conduct research; they now drive national and regional development (Philpott et al., 2011).

Various conceptual models have been developed worldwide to understand entrepreneurial universities' characteristics and transformation processes. According to the Triple Helix model proposed by Etzkowitz (2018) and Etzkowitz and Leydesdorff (1995), synergy between business, government, and universities is essential for building an innovation ecosystem. However, in his book "Creating Entrepreneurial Universities," Clark (1998) identifies five key components of institutional transformation: the strengthening of the managerial core, the revitalization of the academic heartland, the diversification of funding sources, the establishment of a developmental periphery, and the fostering of an entrepreneurial culture.

Since implementing Indonesia's higher education autonomy policy, institutional transformation toward the entrepreneurial university model has gained increased attention. One prominent example is the State University with Legal Entity (Perguruan Tinggi Negeri Badan Hukum or PTN-BH) scheme, which offers greater flexibility in academic, organizational, and financial governance (Darlis et al., 2023; Rusydi et al.,

2023). Theoretically, the PTN-BH model is expected to enable universities to become more creative, adaptive, and autonomous. Nonetheless, empirical studies indicate that such transformation does not always progress linearly and is often contingent upon institutional leadership and the broader university ecosystem (Dalmarco et al., 2018).

Furthermore, the existing literature on entrepreneurial universities in Indonesia remains limited and predominantly descriptive or normative. Most studies rely on policy analysis or survey-based approaches, which are often insufficient in capturing the full complexity of institutional change processes (Feola et al., 2021; Novela et al., 2021a). Institutional transformation encompasses structural or policy shifts and cultural, symbolic, and everyday practices experienced by internal university actors.

The urgency of this research is underscored by the critical role that entrepreneurial universities play in driving national and regional economic development. Without a deep understanding of how universities transform into entrepreneurial institutions, particularly in the Indonesian context, efforts to enhance higher education policies and institutional strategies may remain unfocused and ineffective. The PTN-BH scheme in Indonesia, which offers greater flexibility in governance, presents a unique context that requires focused investigation. Despite its potential, the implementation of entrepreneurship at the faculty and program level remains suboptimal, with barriers stemming from internal resistance to change, a lack of entrepreneurial incentives for faculty members, and weak policy frameworks (Mudde et al., 2017; Sakapurnama et al., 2019).

To address this gap, this article adopts an ethnographic approach as the primary method for examining the process of entrepreneurial university transformation in five PTN-BHs in Indonesia. The ethnographic approach enables researchers to delve into campus actors' social and symbolic world through participatory observation, in-depth interviews, and exploration of transformation narratives occurring at the micro-organisational level (Pilegaard et al., 2010; Robinson & Shumar, 2014). Thus, this study describes policy structures and institutional achievements and uncovers the internal dynamics that are often hidden in institutional change.

Conceptually, this article uses theories from the HEInnovate Framework (OECD/EU, 2018) and Clark (1998) to contextualize university transformation dynamics. This framework determines the factors that drive and hinder the change process. It also examines how university administration, faculty, students, and support units interpret and implement the entrepreneurship agenda as internal actors within the university. Most existing studies use quantitative approaches or institutional surveys, thus failing to address the social and cultural aspects that are important contexts in institutional change. To bridge this gap, an ethnographic approach becomes relevant. Stolze's (2021) meta-ethnographic study identifies four phases of university transformation: initiation, experimentation, consolidation, and institutionalisation. Narratives, symbolic practices, and institutional power relations greatly influence this process. Pilegaard et al. (2010) and Robinson and Shumar (2014) also show that the ethnographic approach can reveal the dynamics of transformation through participatory observation, in-depth interviews, and interpretation of institutional culture. This approach focuses on policies and structures and the subjective experiences, motivations, and resistance of the actors involved in the change.

Therefore, this study aims to develop a university entrepreneurship transformation model based on the practical experiences and real-world practices of five state universities in Indonesia. Specifically, the research seeks to: (1) identify the driving and inhibiting factors in the transformation process toward entrepreneurial universities; (2) explore how

university administration, faculty, students, and support units interpret and implement the entrepreneurship agenda; and (3) uncover the internal dynamics, including cultural, symbolic, and everyday practices, that influence institutional change. By addressing these multiple objectives, the study aims to provide a comprehensive understanding of entrepreneurial university transformation in the Indonesian context.

The findings of this research are expected to provide both theoretical and practical contributions. Theoretically, this study contributes to the development of literature on entrepreneurship in higher education by providing an in-depth, ethnographic-based analysis of university transformation in a developing country context. Practically, the findings are intended to offer actionable insights for stakeholders, including university leaders, policymakers, and government agencies, in formulating policies, strategies, and institutional interventions that support sustainable university transformation (Novela et al., 2021b; Stolze, 2021). By achieving these objectives, the study aims to contribute to the enhancement of higher education governance and the development of entrepreneurial universities in Indonesia.

Although many studies have discussed university transformation, there is a significant gap in understanding the transformative process in the context of developing countries, particularly Indonesia. The lack of research exploring the symbolic, cultural, and narrative dimensions of change in the university environment opens up opportunities for an ethnographic-based qualitative approach. Thus, this research contributes to the development of theoretical and empirical frameworks by exploring the internal dynamics of entrepreneurial university transformation in Indonesia, particularly in the context of PTN-BH, using a more in-depth and contextual ethnographic approach. The article is organized as follows. The next section discusses the theoretical background, followed by the research methods. The results and discussion are then presented, and the final section concludes the study.

2. Theoretical Background

2.1 The Entrepreneurial University Concept

The entrepreneurial university concept has emerged as a response to the growing demand for higher education institutions to contribute actively to economic development, innovation, and social progress. Etzkowitz et al. (2004) define entrepreneurial universities as institutions that function not only as educational and research entities but also engage directly in economic activities through entrepreneurship, such as starting businesses, collaborating with industry, and commercializing research results. Such universities are considered catalysts for innovation that can respond to the demands of socio-economic dynamics and technological advances worldwide (Vefago et al., 2020).

The entrepreneurial university represents a paradigm shift from the traditional Humboldtian model, which emphasized the unity of teaching and research, toward a more engaged and market-oriented institution. This transformation is driven by several factors, including reduced public funding for higher education, increased competition among universities, and the growing recognition that universities play a crucial role in national and regional innovation systems (Philpott et al., 2011). Guerrero et al. (2014) further emphasize that entrepreneurial universities contribute to regional development by fostering entrepreneurship, creating spin-off companies, and facilitating knowledge transfer to industry and society.

2.2 Theoretical Frameworks for University Transformation

2.2.1 Triple Helix Model

The Triple Helix model, proposed by Etzkowitz and Leydesdorff (1995) and further developed by Etzkowitz (2018), provides a foundational framework for understanding the relationship between universities, industry, and government in fostering innovation and economic development. The model posits that synergy between these three institutional spheres is essential for building a robust innovation ecosystem. In this model, universities are no longer subordinate to industry and government but become equal partners in the knowledge-based economy.

The Triple Helix model has three core dimensions: (1) the internal transformation of each institutional sphere, (2) the influence of one sphere upon another, and (3) the creation of a new hybrid organizational format that emerges from the interactions between the three spheres. Etzkowitz (2018) argues that this model is particularly relevant for developing countries where universities are expected to play a proactive role in driving economic development. However, the application of the Triple Helix model in different national contexts requires adaptation to local institutional arrangements, cultural norms, and economic conditions.

2.2.2 Clark's Five Pathways to Transformation

Burton Clark's (1998) seminal work, "Creating Entrepreneurial Universities: Organizational Pathways of Transformation," provides one of the most influential models for understanding university transformation. Based on a comparative study of five European universities, Clark identifies five key elements or "pathways" that enable traditional universities to become more entrepreneurial:

- 1) **Strengthened Steering Core.** The development of a strong central management team capable of guiding institutional change and making strategic decisions. This includes the strengthening of university leadership, the creation of new administrative units, and the establishment of clearer lines of authority and accountability.
- 2) **Expanded Developmental Periphery.** The establishment of new units and structures that bridge the university with the external environment. These include technology transfer offices, business incubators, continuing education units, and industry liaison offices that facilitate collaboration with external partners and the commercialization of research.
- 3) **Diversified Funding Base.** The pursuit of alternative sources of funding beyond traditional government allocations. This includes generating income from research contracts, consulting services, continuing education programs, intellectual property commercialization, and philanthropic donations. A diversified funding base reduces dependence on government funding and provides financial stability.
- 4) **Stimulated Academic Heartland.** The integration of entrepreneurial values and practices into the core academic units, including departments and faculties. This involves motivating faculty members to engage in entrepreneurial activities, aligning departmental incentives with institutional goals, and creating a culture that values both academic excellence and practical impact.
- 5) **Integrated Entrepreneurial Culture.** The development of a shared entrepreneurial identity and set of values across the entire institution. This includes fostering a culture that embraces risk-taking, innovation, collaboration with external partners, and responsiveness to societal needs. An integrated entrepreneurial culture ensures that

entrepreneurship becomes embedded in the daily practices and identity of the university community.

Clark's model has become a reference in many studies across Europe, Asia, and Latin America, explaining how universities transform into more adaptive and proactive institutions regarding economic opportunities. However, Clark's model was developed based on the experiences of European universities and may not be directly applicable to developing country contexts without adaptation to local conditions (Bizri et al., 2019; Dalmarco et al., 2018).

2.2.3 HEInnovate Framework

The HEInnovate framework, developed by the European Commission and the Organisation for Economic Co-operation and Development (OECD/EU, 2018), is another widely used tool for assessing the entrepreneurial capacity of higher education institutions. HEInnovate offers a comprehensive framework for self-assessment and strategic planning, encompassing eight evaluative dimensions:

- 1) **Leadership and Governance.** The commitment of university leadership to promoting entrepreneurship and innovation, and the existence of supportive governance structures.
- 2) **Organisational Capacity, Funding, and People.** The availability of resources, including funding, staff, and infrastructure, to support entrepreneurial activities.
- 3) **Entrepreneurial Teaching and Learning.** The integration of entrepreneurship education into the curriculum, including the development of entrepreneurial mindsets, skills, and competencies.
- 4) **Preparing and Supporting Entrepreneurs.** The provision of support services for students and faculty interested in starting ventures, including mentoring, incubation, and access to finance.
- 5) **Digital Transformation and Capability.** The use of digital technologies to enhance entrepreneurial activities and institutional responsiveness.
- 6) **Knowledge Exchange and Collaboration.** The extent to which the university engages with external partners, including industry, government, and civil society, in knowledge exchange activities.
- 7) **The Internationalised Institution.** The integration of international perspectives and collaboration into entrepreneurial activities.
- 8) **Measuring Impact.** The assessment and evaluation of the university's entrepreneurial activities and their impact on students, the institution, and the broader society.

The HEInnovate framework provides a practical tool for universities to assess their entrepreneurial capacity and identify areas for improvement. However, like Clark's model, its application in different national contexts requires consideration of local conditions and institutional specificities.

2.3 Empirical Studies on University Transformation

2.3.1 International Evidence

Dalmarco et al. (2018) conducted research in Brazil, emphasizing that organisational cultural change and leadership encouraging innovation are key catalysts in driving universities to become more entrepreneurial. They assert that this process is not linear but adaptive to local social and economic conditions. The study highlights that successful transformation requires alignment between institutional policies, faculty incentives, and the broader innovation ecosystem.

Bizri et al. (2019) examined a similar study in Lebanon, highlighting the importance of flexible governance, institutional incentives, and the role of innovation units and industry networks as key components in accelerating universities' transition toward entrepreneurship. Both studies conclude that transformation models from developed countries cannot be directly applied in developing countries without adjustments to local contexts and differing structural challenges.

Stolze's (2021) meta-ethnographic study identifies four phases of university transformation: initiation, experimentation, consolidation, and institutionalisation. The study reveals that narratives, symbolic practices, and institutional power relations greatly influence this process. Through the synthesis of multiple ethnographic studies, Stolze demonstrates that university transformation is not a linear, top-down process but rather a complex, negotiated, and often contested process involving multiple actors with diverse interests and interpretations.

Pilegaard et al. (2010) and Robinson and Shumar (2014) also show that the ethnographic approach can reveal the dynamics of transformation through participatory observation, in-depth interviews, and interpretation of institutional culture. These studies emphasize that ethnographic methods are particularly valuable for capturing the subjective experiences, motivations, and resistance of the actors involved in the change process, aspects that are often overlooked in survey-based or purely policy-oriented research.

2.3.2 Evidence from Indonesia

In Indonesia, studies on entrepreneurial universities are still relatively limited. Mudde et al. (2017) and Sakapurnama et al. (2019) indicate that the barriers to transformation stem from internal resistance to change, a lack of entrepreneurial incentives for faculty members, and weak policy frameworks. Although the PTN-BH programme provides greater autonomy in strategic decision-making, implementing entrepreneurship at the faculty and programme level remains suboptimal.

Darlis et al. (2023) and Rusydi et al. (2023) examine the implementation of the PTN-BH scheme in Indonesia, highlighting the opportunities and challenges associated with greater institutional autonomy. Their research indicates that while the PTN-BH model theoretically enables universities to become more creative, adaptive, and autonomous, empirical evidence shows that such transformation does not always progress linearly and is often contingent upon institutional leadership and the broader university ecosystem.

Novela et al. (2021a, 2021b) explore the entrepreneurial university concept in the Indonesian context, emphasizing the need for more contextualized approaches to understanding university transformation. They argue that most existing studies rely on policy analysis or survey-based approaches, which are often insufficient in capturing the full complexity of institutional change processes. Feola et al. (2021) similarly note that the social and cultural dimensions of transformation, including the everyday practices and interpretations of internal university actors, remain underexplored.

2.4 Research Gap and Contribution

Although many studies have discussed university transformation, there is a significant gap in understanding the transformative process in the context of developing countries, particularly Indonesia. The lack of research exploring the symbolic, cultural, and narrative dimensions of change in the university environment opens up opportunities for an ethnographic-based qualitative approach.

Most existing studies use quantitative approaches or institutional surveys, thus failing to address the social and cultural aspects that are important contexts in institutional change. Institutional transformation encompasses not only structural or policy shifts but also cultural, symbolic, and everyday practices experienced by internal university actors. The subjective experiences, motivations, interpretations, and resistance of faculty members, administrators, students, and support staff are often overlooked in purely quantitative research.

Thus, this research contributes to the development of theoretical and empirical frameworks by exploring the internal dynamics of entrepreneurial university transformation in Indonesia, particularly in the context of PTN-BH, using a more in-depth and contextual ethnographic approach. By adopting ethnographic methods, this study aims to uncover the hidden dynamics of institutional change, including the narratives, symbolic practices, and power relations that shape the transformation process. The findings are expected to complement existing literature, which has predominantly focused on structural and policy dimensions, by providing a richer, more nuanced understanding of how university actors experience, interpret, and enact the entrepreneurship agenda. This research also aims to develop a university entrepreneurship transformation model based on the practical experiences and real-world practices of five state universities in Indonesia, which can serve as a reference for other institutions undergoing similar transformation processes.

3. Methods

3.1 Research Approach

This study uses a qualitative approach with ethnographic methods to explore the transformation process of state-owned universities (PTN-BH) in Indonesia towards an entrepreneurial university model. The ethnographic approach is considered appropriate because it can uncover experiences, social practices, cultural values, and organisational dynamics from the perspective of those directly involved (Pilegaard et al., 2010; Robinson & Shumar, 2014). The primary objective of this approach is to understand the phenomenon of transformation not merely as a formal institutional process but also as a social construction influenced by local context, actor interactions, and institutional symbols.

3.2 Research Location and Unit of Analysis

The research was conducted at four leading PTN-BHs in Indonesia that have diverse institutional characteristics and entrepreneurial initiatives:

- 1) Airlangga University (UNAIR)
- 2) Gadjah Mada University (UGM)
- 3) Sebelas Maret University (UNS)
- 4) Bogor Agricultural University (IPB)

The selection of cases was based on the following criteria: (a) institutional status as a PTN-BH, (b) involvement in business incubation programmes, (c) national recognition as a university with innovative performance, and (d) geographical representation and faculty typology.

3.3 Data Collection Techniques

Data was collected from January to September 2024 using three main techniques:

- 1) Participatory observation of institutional activities related to innovation, entrepreneurship, and business incubation activities.

- 2) Semi-structured in-depth interviews with 20 informants, consisting of university leaders, lecturers, business incubator staff, and students involved in innovation programmes.
- 3) Focus Group Discussions (FGD) involving five experts from the university, which was the locus of the research, were conducted to validate and enrich the field findings.

Table 1. Description and Codification of Research Informants

No.	Informant Name	Informant's Institution	Position
1	Informant 1	UNAIR	Entrepreneurship Lecturer, FEB
2	Informant 2	UNAIR	Coordinator of Incubator and Startup, BPBRI
3	Informant 3	UGM	Professor of Industrial Management Science, FTP
4	Informant 4	UNS	Deputy Manager of Marketing
5	Informant 5	IPB	Lecturer, IPB University Business School

Source: Data processed (2024)

3.4 Data Analysis Techniques

Data was analysed using thematic analysis (Moleong, 2021; Raco, 2018) with the following stages:

- 1) Transcription of data from interviews and FGDs
- 2) Open and axial coding to group data into themes
- 3) Thematic categorisation based on the theoretical framework (Clark, HEInnovate, and Stolze)
- 4) In-depth interpretation of interactions, narratives, and symbols that emerge in the transformation process

The analysis was conducted iteratively, where empirical data were continuously linked to theory and refined through researcher reflection and discussions with experts.

3.5 Data Validity and Reliability

To maintain the validity and reliability of the findings, the following were conducted:

- 1) Source triangulation: comparing data from interviews, observations, and documents
- 2) Method triangulation: combining different data collection techniques
- 3) Member checking: relaying preliminary findings to key informants for clarification and confirmation
- 4) Audit trail: systematic recording of the analysis process and interpretive decision-making

Institutional documents such as vision and mission statements, strategic plans, annual reports, and university business unit guidelines are used as supplementary materials to enrich the context and strengthen interpretation.

4. Results and Discussion

4.1 Stages of Entrepreneurial University Transformation

Transforming higher education institutions into entrepreneurial universities is not a linear and instantaneous process but a complex and dynamic journey. Based on observations, in-depth interviews, and Focus Group Discussions (FGDs) with stakeholders at five PTN-BHs, it was found that this transformation process occurs

through four main stages: (1) Initiation, (2) Experimentation, (3) Consolidation, and (4) Institutionalisation. These four stages adapt the institutional transformation framework proposed by Stolze (2020), which has been modified to suit the local context of Indonesia.

Table 1. Stages of Entrepreneurial University Transformation

Stage	Key Activities	Characteristics
Initiation	Basic entrepreneurship training, establishment of incubator units, strengthening external networks	Entrepreneurship agenda still peripheral, faces resistance
Experimentation	Business competitions, internship programs with startups, expansion of industry collaborations	Piloting various initiatives, assessing organizational adaptability
Consolidation	Integration into Strategic Plans, business incubation roadmaps, governance systems	Alignment of dispersed initiatives with strategic direction
Institutionalisation	Embedding entrepreneurial values into curriculum, innovation-based performance indicators, triple helix collaborations	Entrepreneurial values become embedded in norms, culture, and everyday practices

Source: Processed data (2024)

4.1.1 Initiation Phase

The initiation stage is the initial phase of introduction to the entrepreneurship agenda. At this stage, universities want to develop new roles beyond their traditional tri-dharma functions. Activities at this stage include conducting basic entrepreneurship training, establishing incubator units, and strengthening networks with external partners.

One informant from UNAIR stated:

"We started by forming a startup unit and partnering with industry partners, even though not all faculties were immediately interested at first." (Informant 1)

This shows that the entrepreneurship agenda is still peripheral and faces resistance from some academic community members. This stage aligns with the initiation phase in Stolze's (2021) meta-ethnographic study, in which universities begin to respond to the need for transformation but are still in the idea exploration stage.

4.1.2 Experimentation Phase

Following the initial introduction stage, the institution enters the experimentation phase, during which various entrepreneurial initiatives are piloted. At this stage, universities begin to organize business competitions, internship programs with startups, and expand collaborations with the industrial sector.

An informant from one of the PTN-BH institutions noted:

"We developed a business bootcamp program for students and lecturers, and integrated it with the Merdeka Belajar (Freedom to Learn) initiative." (Informant 4)

This phase is crucial in assessing the extent to which the organization can adapt to entrepreneurial logic. Dalmarco et al. (2018) emphasize the importance of providing a flexible space for experimentation in this stage to foster innovation and institutional learning.

4.1.3 Consolidation Phase

The third phase is consolidation, aligning dispersed entrepreneurial initiatives with the institution's strategic direction. At this stage, universities incorporate entrepreneurship

into their Strategic Plans (Rencana Strategis), develop business incubation roadmaps, and establish governance systems that support entrepreneurial activity.

As expressed by Informant 5 from IPB:

"We now have a business incubation roadmap that is part of the university's strategic plan."

During this phase, entrepreneurship-related performance indicators begin to be integrated into faculty and institutional evaluations. The consolidation process also strengthens the formation of formal structures such as Innovation Offices, Academic Business Units, and Industry Partnership Divisions.

4.1.4 Institutionalization Phase

The final stage of transformation is institutionalization, in which entrepreneurial values become embedded in the university's norms, culture, and everyday practices. At this point, the identity of an entrepreneurial university is reflected not only in policies and structures but also in the internalization of values by institutional actors.

"We want the spirit of innovation to be more than just a slogan — it must be embedded in the mindset of both lecturers and students," stated an informant from UNS (Informant 4).

Institutionalization is marked by integrating entrepreneurial values into the core curriculum, developing innovation-based performance indicators, and strengthening triple helix collaborations among universities, industry, and government (Etzkowitz & Leydesdorff, 1995). This phase reflects a university's success in building a sustainable and adaptive entrepreneurial ecosystem.

4.2 The Role of Actors And Transformational Leadership

The transformation of a higher education institution into an entrepreneurial university is not solely dependent on policy frameworks or institutional structures. Rather, it is profoundly shaped by the active engagement of key internal actors. In this context, transformational leadership serves as a critical catalyst in driving cultural change, facilitating innovation, and mobilizing internal resources to implement the entrepreneurial agenda sustainably.

4.2.1 The Rector and Top Leaders as Strategic Direction Setters

The role of the rector as the central figure within the "steering core" is paramount, as outlined in Clark's (1998) model, which emphasizes the need for a strong and visionary central authority to drive the transformation of universities toward greater adaptability and innovation. In Clark's conceptualization of the entrepreneurial university, the "strengthened steering core" is a central element in the transformation process. This steering core refers to university leadership that functions not merely as institutional administrators, but as visionaries, strategic architects, and internal change agents.

In the context of this study, field findings indicate that universities led by rectors with an entrepreneurial vision and tangible support for innovation tend to progress more rapidly and consistently in institutional transformation. This is illustrated by the following interview excerpt from Informant 4 at Universitas Sebelas Maret (UNS):

"Change happens because we have a leader who encourages lecturers to think like entrepreneurs, not just academics." (Informant 4)

This statement underscores the critical role of transformational leadership—namely, leadership that inspires, motivates, and encourages academic communities to step beyond the confines of traditional academic paradigms—in driving institutional cultural change.

Moreover, such strategic leadership motivates faculty and students to engage in entrepreneurial activities and formulates concrete policies and institutional incentives. As noted by Informant 1 from Universitas Airlangga (UNAIR):

"Our rector established entrepreneurship as a key performance indicator for the university, so every unit must contribute." (Informant 1)

This reflects how the rector's role encompasses formulating long-term strategies, legitimizing the entrepreneurial agenda, and allocating resources to support innovative initiatives. A study by Dalmarco et al. (2018) in Brazil also found that visionary leadership is a primary driver in cultivating an institutional culture conducive to entrepreneurship. Without the commitment and consistency of top leadership, institutional transformation tends to be symbolic or limited to sporadic programs. Thus, within the framework of entrepreneurial university transformation, the rector and top leadership serve as strategic direction setters whose role is crucial in determining the success or failure of institutional change.

4.2.2 Innovation and Business Incubator Leaders as Agents of Change

In the institutional transformation process toward becoming an entrepreneurial university, in addition to the strategic role of the rector, other key actors play a vital role—namely, the leaders of innovation units, business incubators, and enterprise development centers. These individuals act as the "operational engines" that drive the entrepreneurial ecosystem at the tactical level, bridging the gap between the institution's strategic vision and the practical implementation of activities at the faculty, department, and student levels.

These units are not merely program implementers; they serve as intermediaries connecting macro-level university policies with the micro-level dynamics of classrooms and laboratories. At Universitas Airlangga (UNAIR), the Badan Pengembangan Bisnis Rintisan dan Inkubasi (BPBRIN) has become the epicenter of entrepreneurial activity on campus. As explained by Informant 2 from UNAIR:

"We support lecturers and students in establishing research-based startups and guide them until they are ready to spin off. We also assist with legal matters, promotion, and access to funding." (Informant 2)

Leaders of such units are not merely administrators; they also act as knowledge brokers and change agents who actively build partnerships with external stakeholders, such as venture capital firms, research institutions, and industry players. At Universitas Gadjah Mada (UGM), Informant 3 emphasized the importance of flexibility in incubator management:

"Our structure allows for quick decision-making. Without that flexibility, it would be impossible to keep pace with the fast-moving startup world." (Informant 3)

These findings reinforce the arguments of Bezanilla et al. (2020) and Bizri et al. (2019), who assert that the success of university transformation into entrepreneurial institutions in developing countries largely depends on middle actors—institutional players beyond the top leadership who can translate strategic policies into concrete and innovative actions.

Moreover, these units often serve as hubs for interdisciplinary collaboration and connectors between academic activities and industry needs. At IPB University, according

to Informant 5, the agricultural business unit successfully promoted the downstream commercialization of faculty research into food technology-based enterprises. Business and incubator unit leaders' involvement in designing, overseeing, and evaluating entrepreneurial programs makes them pivotal actors in fostering an innovative culture and building a sustainable entrepreneurship ecosystem. Therefore, their role is not merely technical or administrative, but strategic in internalizing entrepreneurial values into the institutional DNA.

4.2.3 Innovative Lecturers as Drivers of an Entrepreneurial Culture

Institutional transformation cannot succeed without the active involvement of lecturers, who serve as key actors in education and research. Lecturers with an innovative orientation act as entrepreneurial role models and catalysts of cultural change at the faculty and departmental levels. They do more than deliver course content; they embody core entrepreneurial values such as risk-taking, creativity, and independence. Several informants noted that lecturers with industry experience or startup backgrounds are more effective in transmitting the entrepreneurial mindset to students. As stated by an informant from IPB University:

"We have several lecturers who previously founded food-related startups. They are now key figures in our incubator programs and serve as primary mentors for student entrepreneurs." (Informant 5)

Such lecturers are also more likely to proactively develop project-based learning models, foster industry collaboration, and engage in applied research. They encourage students to understand theoretical concepts and generate practical, economically viable solutions. This was affirmed by an informant from Universitas Airlangga (UNAIR), who stated:

"I always encourage students to explore the entrepreneurial potential of their research. For example, a thesis shouldn't be just about publication, but also about developing a prototype or product." (Informant 1)

These findings align with the work of Mudde et al. (2017) and Pilegaard et al. (2010), who argue that lecturers can serve as entrepreneurial role models when granted autonomy, curricular flexibility, and sufficient organizational support. Unfortunately, not all lecturers are equally prepared for this role. As an informant from Universitas Gadjah Mada (UGM) noted:

"It takes time to cultivate an entrepreneurial mindset among lecturers. Many still view their primary responsibility as publishing, rather than creating commercially viable innovations." (Informant 3)

Therefore, innovative lecturers' roles extend beyond instructional facilitators; they are also institutional culture changemakers. Institutional support for entrepreneurship-oriented faculty—through incentives, training, and recognition structures—is essential for embedding entrepreneurial values within the academic environment.

4.2.4 Actor Coalitions as Collaborative Networks

This study finds that the success of institutional transformation is not solely driven by the strength of individual actors, but rather by the cohesion and synergy among internal and external stakeholders within the university ecosystem. Informal collaborations among lecturers, business unit leaders, incubator coordinators, and industry partners often give rise to adaptive and responsive working networks that address innovation and entrepreneurship needs.

As described by an informant from Universitas Airlangga (UNAIR):

"If we rely solely on formal policies, everything moves too slowly. In fact, many successful programs are the result of individual lecturer initiatives and established external networks." (Informant 2)

Such coalitions frequently emerge as cross-unit teams that initiate entrepreneurial programs, apply for innovation grants, or jointly develop incubator schemes. At Universitas Sebelas Maret (UNS), for example, Informant 4 reported:

"We have an informal forum consisting of lecturers, incubator managers, and startup alumni. This forum is the most active in organizing events and creating business collaboration opportunities for students."

These findings align with the concept of distributed leadership proposed by Bizri et al. (2019) and Gianiodis & Meek (2020), which emphasizes that leadership in entrepreneurial universities is not confined to a single formal authority—such as the rector—but is instead diffused across various organizational layers. This approach enables organic, flexible collaboration, especially in large public universities with complex bureaucratic structures like PTN-BH institutions. Furthermore, Informant 3 from Universitas Gadjah Mada (UGM) added:

"We cannot work in silos. Even when designing incubation programs, we involve faculties of engineering, business, law, and partners from outside the university." (Informant 3)

Actor coalitions also play a key role in overcoming internal resistance to change. When change initiatives are driven collectively and inclusively, the potential for inter-unit conflict can be minimized. Additionally, the involvement of external partners—such as industry practitioners, alumni, and funding institutions—strengthens the legitimacy and sustainability of the transformation agenda. Thus, a collaborative approach through actor coalitions expands access to resources and serves as an adaptive strategy in navigating bureaucratic limitations and organizational resistance. This reinforces the notion that the transformation toward an entrepreneurial university is not a purely top-down process but the result of complex interactions among diverse, mutually reinforcing stakeholders.

4.3 Institutional Strategies and Contextual Adaptation

The transformation toward an entrepreneurial university cannot be implemented through a one-size-fits-all approach. Each higher education institution develops distinct institutional strategies shaped by its historical background, institutional strengths, available resources, and external environmental demands. Consequently, the strategies adopted are highly contextual, emphasizing flexibility in responding to dynamic changes.

4.3.1 Strategic Differentiation among State Universities with Legal Entity (PTN-BH)

The research findings indicate that each PTN-BH institution adopts a distinct strategic approach shaped by its unique context and organizational priorities:

- 1) Universitas Gadjah Mada (UGM) has developed a strategy centered on external collaboration and the strengthening of a research-to-commercialization ecosystem. The institution aims to bridge academic research outputs with market needs through the establishment of downstream innovation units and industry partnerships. "We have research products that are marketable, but the challenge lies in building human resource readiness and legal business structures," noted Informant 3 from UGM.
- 2) Institut Pertanian Bogor (IPB) focuses on the downstream application of agricultural research through the development of agro-based business units and technologies. IPB

emphasizes a community-based entrepreneurship approach to enhance engagement with local stakeholders.

- 3) Universitas Airlangga (UNAIR) integrates entrepreneurship into its strategic agenda through the establishment of a Business Development Agency, patent potential mapping, and faculty capacity building for startup development. Lecturers are positioned as knowledge brokers who connect research outputs with business opportunities.
- 4) Universitas Sebelas Maret (UNS) leverages national initiatives such as the Merdeka Belajar Kampus Merdeka (MBKM) program to promote student internships in partner startups and to develop a market-responsive and adaptive curriculum.

These findings reinforce the arguments of Bizri et al. (2019) and Feola et al. (2021), who assert that successful transformation depends on an institution's ability to craft adaptive strategies aligned with internal strengths and external pressures. There is no single universal model; rather, success lies in achieving a contextual fit among institutional vision, organizational culture, and market conditions.

4.3.2 Adaptation Challenges: Human Resources and Business Legality

Several adaptation challenges have emerged during the institutional transformation process, notably the limited capacity of human resources (HR), particularly in terms of entrepreneurial mindset and managerial knowledge. In addition, issues related to business legality have become strategic concerns, especially when universities act as the owners of business entities. As noted by an informant from Universitas Gadjah Mada (UGM):

"We often face uncertainty when commercializing research outputs—should it be under the institution's name, or must a separate legal entity be established?" (Informant 3)

This highlights the urgent need to strengthen internal regulations and institutional mechanisms to bridge academic activities with commercial ventures without compromising public accountability principles.

4.3.3 Institutional Flexibility as the Key to Transformation

Universities that demonstrate flexibility in policy formulation, organizational structure, and governance systems are generally more successful in embracing the entrepreneurial university role. In line with this, the HEInnovate Framework emphasizes the importance of organizational capacity and leadership and governance as two critical dimensions in enabling institutional change (European Commission, 2021).

4.4 Integrating Entrepreneurial Values Into The Curriculum

The transformation of a university toward the entrepreneurial model is incomplete without fundamental changes in its educational dimension—particularly through the integration of entrepreneurial values into the curriculum. However, the findings of this study reveal that this process extends beyond the mere addition of entrepreneurship courses; it requires a comprehensive shift in pedagogical paradigms.

4.4.1 Challenges in Integrating Entrepreneurship into the Formal Curriculum

Most of the PTN-BH institutions examined in this study have incorporated entrepreneurship courses into their undergraduate curricula, with some even making them mandatory. However, the content of these courses often remains generic, lacking

contextual relevance and integration with students' primary academic disciplines. As noted by an informant from Universitas Airlangga (UNAIR):

"We already have a compulsory entrepreneurship course, but the challenge is making it contextual and interdisciplinary." (Informant 1)

This statement highlights that the current integration approach remains additive rather than transformative. Entrepreneurship education tends to stand alone, rather than being embedded as a core learning philosophy throughout the curriculum.

4.4.2 Contextual and Interdisciplinary Learning

Achieving the goals of an entrepreneurial institution requires interdisciplinary and experiential learning strategies. Such approaches allow students from diverse fields to collaborate, solve real-world problems, and develop solution-based business prototypes. Studies by Audretsch and Belitski (2021) and Peterka and Salihovic (2012) suggest that effective entrepreneurship education should focus not only on business skills but also on cultivating entrepreneurial attitudes and creative thinking.

Several universities in this study have begun to adopt more progressive curriculum integration strategies, including:

- 1) Cross-faculty projects involving students from engineering, business, and design in the development of innovative products;
- 2) The use of case-based learning and design thinking methodologies in entrepreneurship courses;
- 3) Internships and final project collaborations with university-affiliated startups and MSME partners.

These initiatives reflect a shift from traditional, theoretical learning to more dynamic and application-oriented entrepreneurial learning.

4.4.3 Learning Dimension within the HEInnovate Framework

According to the HEInnovate Framework developed by the European Commission, entrepreneurship education is one of the eight core dimensions that signal an institution's readiness to become entrepreneurial. This dimension emphasizes the importance of:

- 1) Embedding entrepreneurial competencies across the curriculum;
- 2) Providing experiential learning opportunities;
- 3) Promoting interdisciplinary learning and teamwork;
- 4) Involving industry practitioners in the learning process.

In the Indonesian context, the adoption of these elements faces several structural challenges, including faculty resistance to changing teaching methods, high workloads, and suboptimal collaboration across departments and faculties.

4.4.4 The Urgency of Pedagogical Transformation

These findings underscore the urgency of pedagogical transformation, entailing a deep shift in both the philosophy and practice of teaching. Entrepreneurship education should not be confined to the classroom; rather, it must be fully integrated throughout the student learning journey—via innovation labs, community projects, student business incubators, and extracurricular activities that address social and economic challenges. This aligns with the concept of the entrepreneurial academic proposed by Etzkowitz et al. (2004) in which educators extend their roles beyond teaching and research to become facilitators of innovation and agents of social change.

4.5 Implications of The Findings for Model Development

Drawing from the synthesis of observational data, in-depth interviews, and focus group discussions across five PTN-BH institutions, this study formulates a conceptual model of entrepreneurial university transformation that is contextually grounded in the realities of higher education institutions in Indonesia. The model is constructed based on field findings indicating that transformation does not occur in a linear manner, but rather through gradual and interactive processes involving actors, structures, and institutional contexts.

4.5.1 Four Stages of Transformation

Adapting Stolze's (2021) model and modifying it with local insights, the transformation process is articulated into four key stages:

- 1) **Initiation:** The early phase of introducing the entrepreneurial agenda, typically through incubator units, foundational training programs, and pilot initiatives.
- 2) **Experimentation:** The implementation phase of innovative programs such as entrepreneurial internships, business competitions, and limited collaborations with external partners.
- 3) **Consolidation:** The phase in which entrepreneurship is integrated into institutional structures such as curricula, performance indicators, and governance systems.
- 4) **Institutionalization:** The embedding of entrepreneurial values into the university's vision, organizational culture, and strategic policies.

These stages do not always unfold sequentially and may occur simultaneously across different units within the same institution.

4.5.2 Four Key Dimensions of Transformation

The findings further identify four interrelated dimensions that constitute the foundation of the proposed transformation model:

- 1) **Strategic Leadership:** Leadership at the rectorate, deanery, and innovation unit levels plays a dominant role in shaping vision and resource allocation. Visionary and collaborative leadership acts as the primary driver of transformation, as emphasized by Clark (1998) in the concept of the strengthened steering core.
- 2) **Institutional Structure:** This includes policies, incentive systems, the legal status of business entities, and curricular integration. Adaptive institutional structures enable universities to navigate between academic roles and economic functions.
- 3) **Entrepreneurial Culture:** Values, attitudes, and norms that promote creativity, experimentation, and solution orientation. Such a culture evolves over time through habit formation, incremental successes, and the influence of internal role models.
- 4) **Actor Dynamics:** Transformation is shaped by the interactions between individuals (rectors, lecturers, students), organizational units (incubators, research centers), and external networks (industry partners, government). Change emerges through negotiation, value conflicts, and ongoing adaptation.

4.5.3 Theoretical Contribution

This model offers a significant theoretical contribution to understanding institutional transformation in higher education within developing countries. Unlike models from developed contexts that often emphasize structural efficiency and funding systems, this model highlights the social and contextual dimensions of change, including informal dynamics, organizational culture, and actor agency. By employing an ethnographic

approach, the study enriches the discourse on university transformation by capturing the nuanced, internal processes of change (emic perspective) that are often overlooked in quantitative studies.

4.5.4 Practical Implications for Universities and Policymakers

The model serves as a roadmap for universities seeking to transform in a more systematic and sustainable manner:

- 1) For university leaders, the model supports the design of context-based transformation strategies rather than the direct adoption of external models.
- 2) For policymakers, the findings advocate for greater regulatory flexibility and institutional incentives that foster grassroots innovation.
- 3) For educators and curriculum managers, the model encourages the integration of entrepreneurial values through transdisciplinary and action-oriented learning.

Accordingly, this model is not merely conceptual but also practical and contextual, offering solutions for the future-oriented transformation of higher education in Indonesia.

5. Conclusion

This study reveals that the transformation of higher education institutions into entrepreneurial universities does not occur linearly or uniformly, but is influenced by complex and dynamic internal and external contexts. Four stages of transformation have been identified: initiation, experimentation, consolidation, and institutionalisation. These four stages reflect the gradual development from introducing entrepreneurial values to institutionalizing practices and structures supporting entrepreneurial activities within the university environment. Additionally, this study's findings indicate that transformation's success is primarily determined by four main dimensions: visionary strategic leadership, adaptive institutional structures, a growing and spreading entrepreneurial culture, and the dynamics of actors that enable cross-role collaboration.

The main theoretical contribution of this study lies in developing a transformation model based on an ethnographic approach that captures the narrative, cultural, and practical dimensions of the institutional change process. This model enriches the literature, which has traditionally relied more on structural and quantitative approaches. These findings strategically guide policymakers and university leaders to develop more contextual, participatory, and long-term-oriented entrepreneurship transformation policies.

However, this study has several limitations. First, the scope of institutions is limited to five PTN-BHs, so the generalisation of findings is still tentative. Second, the study's relatively short duration did not allow for exploring long-term changes. Therefore, further studies are recommended to involve more institutions, including private universities, and use a longitudinal approach to capture the dynamics of transformation comprehensively. Digital ethnography and social network analysis approaches can also be utilised to delve deeper into the role of relationships and collaboration in shaping the campus entrepreneurship ecosystem. Thus, the results of this study are expected to serve as a solid foundation for developing more adaptive and empowering institutional strategies in facing the global challenges of higher education.

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