



**UNDERSTANDING INNOVATION CULTURE DURING AN ORGANIZATIONAL CHANGE:
THE CASE OF TECHNOLOGY BUSINESS AND PARTNERSHIP HUB OF DOST-PCAARRD
INNOVATION AND TECHNOLOGY CENTER**

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ABSTRACT – Innovation culture is a concept that many government and development-oriented organizations are unfamiliar with. Likewise, its role during organizational change remains unclear. Guided by Alm & Jonsson’s Innovation Culture Framework (2014), a qualitative descriptive was employed to explore the concept innovation culture and its purpose in the context of Technology Business and Partnership Hub of the Innovation and Technology Center, which was created in response to the enactment of Republic Act 10055 or Technology Transfer Act of 2009. From this study, we learned innovation culture as an environment often fostered by leaders. During organizational change, an innovation culture encourages new ideas, processes, and systems to enhance the services and operations. The study also highlights innovative teams, groups, technologies, processes, communication, openness to new ideas and projects, and flexibility in the workplace were deemed key elements of innovation culture. Additionally, its purpose in government organization overlaps with the concepts of open innovation and agile organization. Future studies may focus on the role of leaders in promoting innovation culture as well as include beneficiaries and implementers of technology transfer programs for a holistic perspective of innovation culture.

Keywords: Innovation culture, organizational change

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INTRODUCTION

Change and innovation are central and enduring aspects of any organization. Organizations exist because of innovation as it ensures survival, sustained growth, competitiveness (Ahmad et al., 2020). Organizational changes are observed differences over time in an organization's characteristics and activities. When a change is novel and unprecedented, it is deemed an innovation. Organizations change for a number of reasons – mitigation of risks and crisis,

improvement in productivity and performance, use of new technology, adoption of best practices, or reaction to internal and external pressures (Poole & Van de Ven, 2021).

Innovative organizations not only focus on product, service, and technology innovation but also promote a proper innovation culture conducive for a lasting internal environment that fosters innovations (Zhang et al., 2023).

Additionally, government organizations would improve at addressing challenging social problems such as poverty, national security threats, climate change, and health care access by fostering a culture of innovation and collaboration (Polimédio & Ly, 2023).

However, innovation culture remains vague especially in government organizations. Previous studies have documented innovation culture in the context of private firms, hence as a concept it is deemed a process (Claver et al., 1998), a norm (Efrat, 2014), and an environment in an organization (Schmidt et al., 2023) that facilitates and results in innovation. What seems to be lacking in government organization innovation culture literature is the general application of the concept itself, the organizational factors that could help promote such concept, and the role it plays during an organizational change.

This study extends the concept of innovation culture in a government organization, specifically the Technology Business and Partnership Hub under the Innovation and Technology Center of the Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development of the Department of Science and Technology (DOST-PCAARRD). The Hub was noted for its new initiatives as the Innovation and Technology DOST-PCAARRD upscaled its functions related to technology transfer and commercialization and intellectual property (IP) protection programs in the agriculture, aquatic and natural resources (AANR) sector.

Guided by Alm & Jonsson's five dimensions of innovation culture, additional insights on the concept and purpose of innovation culture in government organizations were realized through this study. Furthermore, the study also unpacks how organizational factors, activities and processes aid in promoting its dimensions.

Innovation Culture as a Concept

Innovation culture plays an important role in an organization's capacity to change and innovate. It is believed that a robust innovation culture in an organization encourages employees to participate in decision-making (Shahzad et al., 2017), stimulates innovativeness, and fosters a sense of commitment to innovate at an individual level (Naranjo-Valencia et al., 2010). Moreover, norms and behaviors such as trust and openness, awards and incentives, and autonomy and flexibility promote an innovative climate in organizations (Efrat, 2014).

For Oktariyanda & Achmadja (2023), innovation culture is described in the context of public service innovation as a way or habit that is carried to create good services. Moreover, Xie et al., (2016) and Schmidt et al., (2023) described it as an environment and a culture in an organization, which for Khairuzzaman & Ismail (2007), highlight leadership, organizational structure, strategy, and organizational culture were deemed key factors.

Brettel and Cleven (2011) define innovation culture as "the degree to which organizations are predisposed to learn continuously and to develop knowledge with the intention to detect and fill gaps between what the market desires and what the firm currently offers." Innovation culture is also being referred to as the "shared common values, beliefs and assumptions of organizational members that could facilitate the product innovation process" (Martin-de

Castro et al., 2013); and the “ability of an organization to regularly and consistently define, implement and develop new products, and processes (Losane, 2013; Panjaitan & Frinaldi, 2022).

Recent studies on the innovation process in government organizations underscore the importance of innovation capability or the entrepreneurial interaction among the public sector employees, managers, and politicians (Gullmark & Clausen, 2023). Meanwhile, leadership (Park & Lee, 2021) and leadership behaviors (Moussa & Muenjohn, 2018) underscored the role of leadership and organizational climate and understanding barriers to promote innovation in the public sector.

Additionally, Alm & Jonsson (2014) explains the five dimensions that constitute innovation culture, namely: (1) *‘innovation readiness’*, which pertains to the organization’s purpose to innovate and its preparedness to realize those innovations; (2) *‘learning and creativity’*, which refers to activities or a condition where employees are free to either learn new or interesting area or come up with new ideas; (3) *‘leadership and entrepreneurship’*, which includes favorable management support and participative decision-making, risk-taking, and trust and involvement of co-worker; (4) *‘market orientation’*, which pertains to being responsive to customer needs, environment scanning for information on customer needs, technological advances; understanding of the value chain; and (5) *‘motivations and relations’*, which argues that work itself influences motivation and relationship impact productivity in the organization.

Understanding the Context of Organizations

An organization’s context can be understood by describing based on its structure, which affects the processes including communication and decision-making. A mechanistic structure has a highly centralized authority and more formalized procedures and practices and specialized functions. Organizations with a mechanistic structure consist of employees working on their tasks individually, following a chain of command, and observing policies or operating standards with strict documentation (Burns & Stalker, 1961). Meanwhile, the system-structural perspective, rules and procedures to handle contingencies are part of formalization. Moreover, formalization can also be enabling for individuals in accomplishing their work. Formalization can be maximal or minimal. Maximal formalization is characterized by formalized procedures, letters, and communications regarding the tasks and information processing within an organization (Hall & Tolbert, 2005). In addition, centralization refers to the distribution of power within an organization (Hall & Tolbert, 2005); the level of participation by groups relative to the number of groups in an organization (Hage & Aiken, 1970); the locus of decision-making authority within an organization (van de Ven & Ferry, 1980). Moreover, centralization is not only a matter of who makes decisions. A high degree of centralization remains even when personnel at lower levels in the organization make decisions over “programmed” activities (Rothschild & Whitt, 1986). Also, centralization is also reflected in the evaluation of activities of the organization (Dornbusch & Scott, 1975).

Organizational Change: The Case of Technology Business and Partnership Hub

Understanding the whys and hows of organizational change entails the use of various change models primarily to demonstrate and categorize its components. For instance, Tichy’s TPC Framework underscores three systems: Technical, Political, and Cultural. The technical system represents a highly rational view of the organization while the political system is about power and relations. The cultural systems consist of shared norms and values or “cognitive schemes” (Poole & Van de Ven, 2021). The Tichy’s model argues that these systems must be aligned with the organization’s external environment and history, resources, mission/strategy,

tasks, formal and informal networks, processes, people, performance (Poole & Van de Ven, 2021).

External pressures such as policy reforms drive organizations to change and innovate in terms of strategies, design, processes, and structure. As an example, the enactment of the Republic Act (RA) 10055, known as the Philippine Technology Transfer Act of 2009 led the Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development of the Department of Science and Technology (DOST-PCAARRD) to establish its Innovation and Technology Center. RA 10055 mandates key government agencies to lead and direct various efforts in securing, protecting, and commercializing intellectual property (IP) in the country (DOST-PCAARRD, 2016). In response, the Center was established to lead DOST-PCAARRD's programs and platforms for technology generators and users to present, promote, and commercialize technologies and innovations in the agriculture, aquatic, and natural resources (AANR) sector.

Specifically, the Center's Technology Business and Partnership Hub is tasked to lead the DOST-PCAARRD's programs on technology commercialization and IP valuation and protection. Such organizational change not only defined technical and functional competencies but also came with innovations in terms of identification of new structures and processes as well as essential activities under the purview of the Center.

METHODOLOGY

Design

The current research utilizes a qualitative descriptive research design primarily to explore the concept of innovation culture in the context of a government organization. It uses the case study approach involving the Technology Business and Partnership Hub, a unit within the Innovation and Technology Center of DOST-PCAARRD. The Hub is a relatively small unit, composed of a total of nine technical and administrative staff. The Hub was created in 2016 as a response to the enactment of the RA 10055. The creation of the Hub came with major organizational change and innovation in terms of the structure, processes as well as technical and functional competencies.

Participants

The study involved a total of six participants, composed of a senior staff, two middle-level managers, three technical staff deployed in Technology Business and Partnership Hub. All participants were regular technical staff and have been in the organization for at least three years since the creation of the Innovation and Technology Center. They were selected as they are knowledgeable and can provide rich information and insights on the role of innovation culture in the context of their organization. The technical staff and middle-level managers were asked to describe the structure of and the processes in the Hub and their views on innovation culture. Table 1 presents the general profile of the staff who qualified as participants of the study.

Participants of the Study	General Profile
• senior staff of the Hub (1)	• A senior staff who serves as assistant manager/focal person of the Innovation and Technology Center
• middle-level managers of the Hub (2)	• Are regular and middle-level managers who are assigned as Hub managers.

Participants of the Study	General Profile
<ul style="list-style-type: none"> technical staff of the Hub (3) 	<ul style="list-style-type: none"> Are regular junior technical staff who were deployed/assigned at the Hub.

Table 1 Profile of the participants of the study

Data Gathering Procedure

The researcher utilized open-ended questions to explore the purpose of innovation culture and understand the key processes within the Hub and the Center related to the services and activities of the Hub (i.e., intellectual property management, licensing, valuation, market matching, and commercialization). Each participant was interviewed to elicit their insights and experiences in the Hub since their deployment.

Innovation culture. The participants were asked during the interview to describe what innovation culture is and the role it plays in the organization, primarily in the Hub's initiation phase. Innovation culture in this study was explored using Alm & Jonsson's (2014) dimensions, namely: (1) innovation readiness; (2) learning and creativity; (3) leadership and entrepreneurship; (4) market orientation; and (5) motivations and relations.

Organizational activities. The in-depth interviews explored the activities and how they helped in promoting an innovative culture within the Hub. These include planning and setting of objectives, tasks coordination, collaboration with partners, staff development, and building teams and groups.

Organizational context. The participants were also asked to describe the contextual factors such as the structure and communication to further explain how the organizational processes within the Center and the Hub help in promoting innovation culture.

Conceptual Framework

Understanding innovation culture in the context of government organization entails understanding of the organizational context – its activities and processes – in relation to organizational change and innovations. In the case of DOST-PCAARRD, the enactment of RA10055 resulted in the creation of the Technology and Business Partnership Hub within its Innovation and Technology Center. Part of said organizational change were innovations focused on strengthening the technology commercialization and IP valuation, which came with redefining the structure and operations within the organization. Using Alm & Jonsson's five dimensions of innovation culture as a guide, the study further explores innovation culture while it unpacks the organizational factors and barriers (e.g., structure, activities and processes within the Hub) that promote its dimensions (Figure 1).

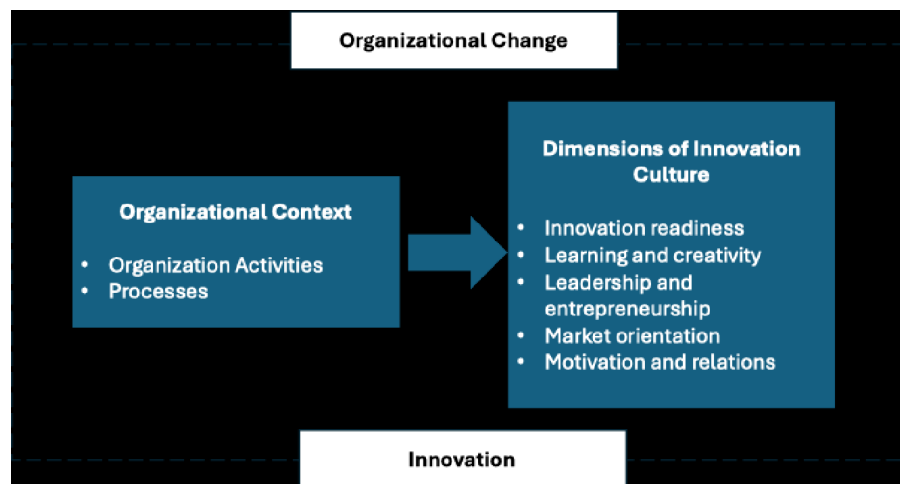


Figure 1 Conceptual framework for understanding innovation culture in the context of a government organization

RESULTS AND DISCUSSION

Innovation Culture In the Context of Hub

The middle-level managers believed that innovation culture can help encourage employees to participate for the betterment of the organization and at the same time aid in smooth interactions within the organization.

“Innovation culture can help push employees to participate and voice their opinions and/or suggestions that could help improve the organization and including the operations.”

Innovation culture can be viewed as a dimension of organizational culture, which can aid in promoting betterment, participation, commitment, learning, leadership, and creativity. Said view aligns with the study of Anderson et al., (2012) and Alm and Jonsson (2014), which described innovative culture as a collective attitude towards innovation, technology, knowledge exchange, entrepreneurial activities and innovation capabilities of an organization.

The technical staff of the Hub thought that innovation culture is an organizational culture, with emphasis on learning and creativity. Additionally, leaders and team members are an essential component of innovation culture.

“Innovation culture is maintained by a good leader and well-committed team members. It can also be viewed as a culture that is open to learning, creative, and has empathy towards its clients and team.”

Moreover, this view of innovation culture relates with the study of Covin & Slevin (2019), which emphasizes the important role of entrepreneurial leadership in fostering a culture of innovation in an organization.

In terms of its purpose, the senior staff and the middle-level managers pointed out that innovation culture is important because such culture “encourages new ideas, new processes, new systems for enhancing the services and operations of an organization” as they embark on the tasks and activities of the Hub. This view also relates with the general concept of ‘open

innovation', which refers to creating value through a strategic path to open up to a competitive environment (Lippolis, Ruggieri, & Leopizzi, 2023). Moreover, open innovations activities are deemed a reaction to external pressures (Barjak & Heimsch, 2023) such as the enactment of RA 10055, which favored an innovative culture to implement changes brought about by the creation of the Center and the Hub in DOST-PCAARRD. Furthermore, open innovation flourishes in an organizational culture where employees recognize each other as their co-workers (Abhari & McGuckin, 2023).

Furthermore, they emphasize the role of innovation culture in realizing Center's tagline, *"Bridging inventions to innovations"* and likewise the functions of Hub. For the senior staff, a strong innovation culture will be beneficial to the Hub to: (1) ensure continuous learning in the Hub to navigate in their expanded role in technology transfer and commercialization; (2) promote innovativeness and facilitate innovation process in the Hub in terms of networking and strategic partnership and in providing technology business services such as IP management, licensing, valuation, market matching, and commercialization; and (3) encourage development of new products and processes within the Hub that are relevant to the institutionalization of technology commercialization pathways. From this view, the role of innovation culture in the Center and of the Hub also entails promoting an 'agile organization' or a human-centric organization capable of adapting to any changes based on the surrounding environment or marketplace (Kiziloglu, Dluhopolskyi, & Laskowska, 2023).

Additionally, the first two purposes of innovation culture in the Hub relate with the innovation readiness and learning and creativity dimensions of innovation culture while the remaining reflects leadership and entrepreneurship dimension espoused by Alm & Jonsson (2014). Likewise, innovation culture is also viewed as an environment (Schmidt et al., 2023) within the organization that is conducive for improvement, learning, and growth.

Organizational Activities and Processes that Promote Innovation Culture in the Hub

Planning and setting of objectives are activities done at three levels. The corporate planning, which involves the division directors and key senior staff of DOST-PCAARRD. The corporate plan aligns with the priority development agenda of the national government. Review and planning activities are done at the division level and involve the division head, unit head, and the staff. The division head and the unit head set the tone and direction of the review and planning activity in which the staff and unit head provide inputs. In terms of decision-making, divisional goals and targets are usually defined by the division and unit heads wherein directives are given to units and unit staff to craft their plans and activities. Setting of plans and activities is usually done in consultation with the unit staff. In terms of communicating the plans and objectives, divisional goals and targets are communicated to staff through the unit head using letters and memos with the intent of informing and providing specific expectations. Likewise, communicating plans and activities is done formally and informally within the unit with the purpose of motivating and getting feedback from the unit staff. The same is done at the Technology and Business Partnership Hub.

Activities regarding tasks coordination are also done at various levels. Division and unit heads usually ensure that tasks are aligned with the goals and targets of the division as well as of the corporate plan. Unit heads then coordinate and provide instructions, delegate, and monitor the tasks. Likewise, unit members are expected to deliver and coordinate the tasks as well as provide feedback and update to their unit head. In terms of decision-making, directives to assign and deliver tasks are given to unit heads and staff. Specific tasks are delegated to concerned staff based on their deliverables and terms of reference. Likewise, communicating tasks are done formally from the division down to the units with the intention of giving information and directives. Formal and informal communication of tasks is done within the unit with the purpose of informing, motivating, and getting feedback from the staff. The same is done at the Technology and Business Partnership Hub.

Actors involved in the collaboration with partners and clients are the center manager who represents the Center and makes decisions regarding the direction of and expectations in the center's networking and partnership activities. The unit head and the unit members, in this case, the Technology and Business Partnership Hub, explores and arranges for the partnership with potential partners. Decision-making involves a top-down approach at the division level and consultative and participatory at the center/unit level. Communication likewise is downward and formal from the top and sideward and both formal and informal within the center/unit. Staff development activities of the Center involve the manager, unit heads, and its members and employ bottom-up, participatory approaches in terms of coming up with plans and strategies. Communication serves to inform and control the members of the organization and at the same time elicit feedback and motivate the members of the organization.

The staff development and building teams and groups is an ad hoc activity across the organization. Decision-making is consultative and participatory at all levels and communication is more informal and open to encourage participation and to further motivate the members of the organization. The table below summarizes how these organizational activities aid in promoting innovation culture in the Hub. In a nutshell, these activities not only inform the staff but also encourage participation, feedback through formal and information communication, and motivation.

Table 2

Organizational activities that help promote innovation culture in the Technology and Business Partnership Hub of DOST-PCAARRD Innovation and Technology Center

Organizational Activities	Role in Promoting Innovation Culture
<ul style="list-style-type: none"> • Planning and setting of objectives 	<ul style="list-style-type: none"> • Planning and objective setting contribute in the motivation and eliciting support from the staff.
<ul style="list-style-type: none"> • Coordination of tasks and expectations 	<ul style="list-style-type: none"> • Coordination of tasks and expectations within the hub aids in informing and motivating the staff.
<ul style="list-style-type: none"> • Collaboration with partners and clients 	<ul style="list-style-type: none"> • Collaboration with partners and clients not only informs staff but also elicits their inputs and promote motivation.
<ul style="list-style-type: none"> • Staff development 	<ul style="list-style-type: none"> • Staff development provides feedback mechanisms in the Hub and helps motivate the staff.
<ul style="list-style-type: none"> • Building teams and groups 	<ul style="list-style-type: none"> • Building teams and groups promotes participation and aids in informing and motivating the staff.

From the said organizational activities and processes, the role of leaders and managers (e.g., center manager, unit heads) are deemed an imperative in promoting the dimensions of innovation culture in the Hub, in general. In terms of (1) innovation readiness dimension, participants believed that flexible, consultative, participatory, clear communication of the organization's key performance indicators (KPIs), light levels of formality, firm culture to innovate are some key organizational processes. They highlighted the need for dedicated time and resources for innovation in addition to uncomplicated processes and organization-wide activities for innovation. For (2) learning and creativity, the participants considered teamwork, knowledge sharing, and having the right people to work creatively important. Under (3) leadership and entrepreneurship dimension, participants highlighted the role of a supportive management, communication of the vision and purpose of the Center, and staff freedom to start new initiatives. Likewise, the participants highlighted flexible and collaborative processes under (4) market orientation dimension. Lastly, participative and collaborative decision-making are key in the (5) motivation and relation dimensions of innovation culture.

The organizational activities and processes were aimed at continual improvement and human resource development, thus keeping the Center and its Hubs abreast of the organizational innovations related to managing technologies, technology promotion and commercialization, and IP asset protection. The decision-making in the Hub, primarily those that concern the organizational process, encourages innovation in terms of the operation and attainment of the mandates and the goals of the Center. Communication is also instrumental in promoting creativity and camaraderie among the members of the organization. In the case of the Hub, the availability and use of various means for formal and informal communication aid in the exchange of information and feedback as well as in motivating the staff during the transition phase of the Center.

The organizational activities described in the Hub highlights the different branches of innovation culture espoused in the study of Davies and Buisine (2018), underscoring the importance of conducive environment, innovative team and individuals, and shared attitudes in the organization. More importantly, collaboration and links with outside of the organization are also deemed important.

Factors and Barriers of Innovation Culture

Under the '*innovation readiness*' dimension, participants of the study noted decentralization and clear organizational structure for innovation as success factors while high degree of bureaucracy and distance between related departments as barriers. In terms of '*learning and creativity*' dimension, success factors were the presence of informal networks and groups in the organization to venture in new perspectives, while barriers include homogeneity, boredom due to long projects, and untapped knowledge resources of the organization.

Meanwhile, participants identified under the '*leadership and entrepreneurship*' dimension of innovation culture the management's support and participation in decision-making, which entails leaders who act as they teach, support taking risks, and promote trust among and involvement of co-worker. Some barriers include driving too many changes in the organization.

For '*market orientation*' dimension, success factors include the organization's openness to scan the environment for information on customer needs, technological advances, and understanding the value chain while barriers such as having narrow focus or not having a systems perspective were identified.

Lastly, informal relations, involvement, collaboration and working across departments were success factors under the '*motivations and relations*' dimension of innovation culture while barriers include lack of communication and collaboration among departments and doing too many tasks with less time to being innovative. Table 3 summarizes the factors and barriers of innovation culture.

Dimensions of Innovation Culture	Factors	Barriers
<i>Innovation Readiness</i>	<ul style="list-style-type: none"> ● department/unit to lead model innovation; ● cooperation between decentralized units, close to market; ● simple and continuous organization improvement 	<ul style="list-style-type: none"> ● complex and rigorous requirements measurements, measuring "everything"; ● high degree of bureaucracy; ● complex organizational structure; ● complex processes for innovation;

Dimensions of Innovation Culture	Factors	Barriers
		<ul style="list-style-type: none"> • slow to implement/diffuse initiatives
<i>Learning and Creativity</i>	<ul style="list-style-type: none"> • self-organizing and diverse teams and/or temporary working groups; • informal networks of experienced staff sharing their knowledge 	<ul style="list-style-type: none"> • too homogenous teams, engaging creative people in long projects; • lack of internal knowledge sharing, databases for sharing knowledge are available but not used, • lack of staff rotation
<i>Leadership and Entrepreneurship</i>	<ul style="list-style-type: none"> • leaders who walk the talk; • communicate the vision and the purpose of the organization; • inclusive decision-making; • provide employees with methods, processes, and tools around innovation. • allow staff to start new initiatives 	<ul style="list-style-type: none"> • employees are discouraged to try out new ideas and projects; • introduce too many changes at the same time
<i>Market Orientation</i>	<ul style="list-style-type: none"> • benchmark and observe other people and organizations for new trends 	<ul style="list-style-type: none"> • narrow focus and lack a holistic view of the system or organization
<i>Motivations and Relations</i>	<ul style="list-style-type: none"> • involve everyone to some degree (in decision making and control); • create cross-functional teams especially early in the projects; • work across departments and functions; • find opportunities for development and job rotation 	<ul style="list-style-type: none"> • separated and fragmented departments without continuous collaboration; • lack of communication between departments; • too many set tasks or work overload

Table 3 Organizational factors and barriers of innovation culture in the Hub

Based on the results, structure and contextual factors could influence the promotion of innovation culture in the Hub. According to Poliméidio and Ly (2023), creating a culture of innovation in government, leadership, the workforce, processes and partnerships were deemed key pillars to ensure complex challenges are solved and services are responsive to the public's needs. Organizational structure and contextual factors can also affect the behaviors to innovate but also may shape the different dimensions of innovation culture. Alm and Jonsson (2014) argued that too much formalization and centralization could negatively impact the organization's innovation capability while Hage and Aiken (1970) put that high decentralization and low formalization are characteristics of innovative organization. Also, inappropriate organizational structure not worsen the issues associated with a lack of vision but also impair the formalization of internal innovation processes in the organization (Abhari & McGuckin, 2023).

This study also highlights other salient elements of promoting innovation culture, which include the role of innovative teams/groups, technologies such as databases, innovation processes, communication, openness to new ideas and projects, and flexibility in the workplace. According to Jucevicius (2010), innovation culture entails technological visions, research traditions, value systems, and innovation processes in the organization. Furthermore, a leader's support for innovative action can eventually lead to establishment of a culture of innovation and at the same time implement strategic plans and performance tools to further motivate organizational members (Park, Cho, & Lee, 2021).

The experience of the Technology Business and Partnership Hub, particularly the deployed personnel, could shed light to other institutions going through institutional and organizational change in relation to the full implementation of the Technology Transfer Act. This study demonstrates how innovation culture as well as organizational factors such as new processes and activities, structure, resources could help during change. There remains the need to instill an organizational environment conducive for technology commercialization and IP protection activities in the country. At an organizational level, a lot needs to be done in order to reap the fruits of the RA 10055. According to Catibog (2016), there is still a need to improve IP management, boost manpower for technology commercialization, promote entrepreneurship among researchers, and institutionalize technology transfer offices among Research and Development Institutions (RDIs) including the higher education institutions.

CONCLUSION AND RECOMMENDATIONS

From this study, we learned that innovation culture as a concept pertains to an environment conducive for learning, growth, and improvement. Additionally, innovation culture can further promote an agile organization capable of adapting to any changes. The concept and purpose of innovation culture in government organization coincides with open innovation as a response or reaction to external pressures.

We also learned that innovation readiness, learning and creativity, leadership and entrepreneurship dimensions of innovation culture are important during an organizational change. These dimensions encourage organizations to develop new ideas, welcome new processes and new systems for enhancing the services and operations, and realize the new roles and functions of the organization.

We also learned that innovation culture could aid in promoting participation and commitment to the new processes, activities, and functions during organizational transition. Organizational activities and processes involved are also key in promoting innovation culture. In this study, we learned that planning and objective setting, coordination of tasks, collaboration with partners, staff development, and building teams and groups are important in informing and motivating staff. Likewise, flexible and collaborative processes, dedicated resources, and supportive management are important in promoting the different dimensions of innovation culture. We also learned that rigid bureaucracy and formalization and centralization, physical distance, homogeneity, limited market focus, and lack of communication infrastructure are challenges in promoting innovation culture during transition.

The current study extends our understanding of innovation culture and its purpose especially during an organizational change driven by an external force. In addition to the five dimensions, the study also highlighted innovative teams, groups, technologies, processes, communication, openness to new ideas and projects, and flexibility in the workplace key elements of innovation culture.

Future studies may include understanding the role of leaders in promoting innovation culture as well as the processes that lead to a healthy relationship within an organization. Likewise,

individuals and other practitioners engaged in technology transfer and commercialization, beneficiaries and implementers may also provide different perspectives or richer experiences thus contributing in having a holistic organizational perspective of innovation culture.

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