FOSTERING FURTHER PARTICIPATION IN AGRI-FOOD BUSINESS GLOBAL VALUE CHAINS: A MULTIPLE CASE-STUDY ON INTERMEDIARY ROLES AND CAPABILITIES IN THE PHILIPPINE RICE AND MANGO INDUSTRIES

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SUMMARY

Through the co-evolutionary relationship between Global Value Chains (GVCs) and innovation systems (IS) (Lema, Pietrobelli, and Rabellotti, 2018), developing countries enable their local industries to maximize value creation and learning (Gereffi and Fernandez-Stark, 2018). However, gainful inclusion, and further participation and upgrading, especially for local producers and micro-, small-, and medium- enterprises (MSMEs) in agri-food business (AFB) industries, is not necessarily automatic and requires countries also to develop their innovation systems (IS) (Humphrey and Memdovic, 2006; Altenburg, 2007; Edquist, 2005). Developing countries need to address systemic gaps and barriers that hinder their industries' inclusion and further participation and upgrading (Partners, 2007; Chunhavuthiyanon and Intarakumberd, 2014; Lema, Rabellotti, and Sampath, 2018). To address these gaps and barriers, the maximization of support by innovation intermediaries is necessary (Partners, 2007). These are organizations that go-between for two or more parties to aid in the innovation and upgrading process, create long-lasting relationships, and help overcome barriers to innovation and upgrading (Howells, 2006; Partners, 2007; Nakwa, 2013; Sutthijakra and Intarakumnerd, 2015; Ramirez, Clarke, and Klerkx, 2018; Go, 2019). However, the

understanding of intermediaries primarily stems from the IS literature. A gap remains in understanding how they perform roles and build key-capabilities, knowing that the GVC and IS have a co-evolutionary relationship.

A developing country with longstanding systemic gaps and barriers in its AFB industries is the Philippines (Quimba, Albert, and Llanto, 2017; National Economic Development Authority [NEDA], 2017). Two industries that are hindered by these gaps and barriers are the Philippine rice and mango industries. For the Philippine rice industry, innovation and upgrading are sorely needed in farm mechanization and lower the still high labor costs in rice production (NEDA, 2017). On the other hand, the country's mango industry has experienced a significant drop in exports as it battles with issues on its lack of scale economies, low uptake of modern technology, and poor adherence to global standards (Food and Agricultural Organization of the United Nations, 2021; Fernandez-Stark, Couto, and Gereffi, 2017). Given their issues, it becomes crucial to learn how these industries may maximize the support provided by innovation intermediaries to aid in their development.

This study attempts to understand better how innovation intermediaries perform their roles and build key-capabilities to aid in the inclusion and further participation and upgrading of producers, MSMEs, and other actors in the Philippine rice and mango value chains.

This study addresses the following research question o achieve its objectives: *how do intermediary organizations perform their roles and build necessary key-capabilities to support the inclusion and further participation and upgrading of various players in AFB GVCs?*

The study also asks three sub-questions that also form the independent variables assessed in the dissertation:

1. How do differences in *organization type* affect the roles and key-capabilities of intermediary organizations?
2. How do differences in *value chain segment* support affect the roles and key-capabilities of intermediary organizations?
3. How do differences in their partners' *primary market orientation* (export- or domestic-market) affect the roles and key-capabilities of intermediary organizations?

To answer these questions, I employed the multiple case study method. The data collection methods used were the following: semi-structured interviews, focus group discussions, researcher observations, and secondary desk research. Moreover, I employed two frameworks to analyze how variations within the three variables affect an intermediary's role performance and key-capability building. Specifically, I applied Partners' (2007) *Four Intermediary Roles* framework and an adapted version of Sutthijakra and Intarakumnerd's original (2015) and Go's supplemented (2019) *Intermediary Key-Capabilities to Enhance Networks and Enhance Resources.*

In preparing for the study, I initially conducted a pilot interview with 11 industry experts from November 2019 to January 2020 to better understand both industries and select possible innovation intermediary participants. Eighteen organizations participated in the study, comprising three government agencies, four public research institutes, four industry associations, three social media groups, two private firms, and two non-governmental organizations. The data gathering proper was done from March 2020 to

November 2021. A total of 43 interviews and two FGDs were conducted under different modes.

To ensure data validity, the researcher employed several data triangulation strategies, including interviews from non-intermediary and various value chain actors, requests for research participation consent from organizations and individuals, validation and feedback requests with several research participants, and secondary desk research.

From the cases of intermediaries in the Philippine rice and mango industries, I first find that similar organization types perform roles in many similar ways. Furthermore, almost all organizations also perform roles simultaneously, thus showing that the four roles are tied to one another. Moreover, I find five factors that may create the differences in their individual and organizational role performances.

In value chains, more tightly wound chains like that in the mango industry make more intermediaries present in multiple segments. Moreover, more roles are performed in the input- and knowledge-heavy segments of input supply, milling for rice, post-harvest for mangoes, and the fresh and processed product split segments. I also find that consultancy and mediation are roles that appear more needed as these roles are performed predominantly throughout both value chains. Furthermore, I propose a method for capturing intermediation in value chains as not all functions and services are evident and captured in the traditional value chain approach. The proposed framework identifies horizontal, vertical, intersectoral, or chain-encompassing intermediary roles.

In either market orientation, the industries may be over reliant on the public sector intermediaries as all four roles are expected to be performed. Still, the private sector

intermediaries may appear better suited to performing various forms of consultancy and mediation of markets.

For intermediary key-capabilities, the researcher finds that knowledge-building and management capabilities are foundational in all three assessed variables. Moreover, external networking and internal communication capabilities are more applied and built as the intermediaries perform their roles. In addition to these, intermediary key-capability building and application may be affected by four factors. Moreover, taking an export- or globally-oriented mindset generates more marked variations in key-capability-building mechanisms between market orientations. Finally, I find evidence to distinguish human resource development as the fifth key-capability, and motivation as the third underlying capability. However, these require more research to substantiate the claim better.

This study contributes significantly to integrating the innovation intermediary concept and phenomenon into the GVC-IS co-evolutionary relationship by applying and assessing the effects of organization type, value chain segment support, and market orientation differences on intermediary roles and key-capabilities. The researcher presents how intermediaries transcend the boundaries of solely concentrating on the IS or GVC by performing roles and building capabilities that aid in the inclusion and further participation and upgrading of various value chain actors, especially MSMEs, on both levels. Moreover, this study further contributes by providing role performance delineations between public and private sector intermediaries in AFB industries and proposing a novel framework to assess intermediation in value chains.

I also provide five policy implications that push for the explicit identification of and further support for innovation intermediaries in the two industries studied and other

Philippine AFB industries. Furthermore, I also present five management implications for intermediaries that may lead to their development as organizations.

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