**A study of Thai innovative rice products: identifying the barriers of sustainability and business viability**

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**Introduction**

Rice is one of the most important commodities for Thai economy and society and it has been facing strong competitions from other countries especially India, Vietnam and Cambodia. The competition and changing consumer trends to healthier life-styles force Thai rice industries to move into the production of non-traditional agricultural products especially agricultural innovative products (AIP) to survive and remain competitive and relevant in the market. There are two sectors of AIPs in Thailand (food and non-food); and, rice AIPs constituted 41% and 33% of each sector, respectively. Narrod and others (2007) identified three major issues preventing small farmers from being economically viable and remaining competitive in the global market: 1) producing recognized safe food, 2) identifying cost-effective technologies and 3) scaling up the production as the major issues. Public-Private Partnership (PPP) was identified as key farm-to-fork linkages that helped small farmers to be viable and relevant their corresponding supply chain.

**Background**

Since 2017, Ministry of Commerce of Thailand has been promoting the innovative products which based on the organic rice. These innovative products can earn more profit margin than community rice. The processor can buy the organic rice raw material at 25 – 300% higher than the market price. The farmers can earn more profit and be able to clear their inventory. However, the problem is the sales volume of the innovative products are not big enough.

**Research approach**

This study investigated three food and two non-food businesses and their corresponding supply chains to identify bottlenecks and/or barriers for scaling up and transferring technology to rice farmers. Their AIPs were organic Jasmine rice milk, organic rice and grain beverage, organic baby rice snack, rice facial cleansing power and black rice hair tonic. The AIPs were selected based on their proven achievement(s) in innovation and businesses’ links to Thai rice farmers. Live-interviews, phone-interviews and business coaching (for 6 months) were conducted to gather in-depth information of the businesses and prepare them for product launch in CLMV countries and China. Therefore, this study involved actual additional marketing interventions (i.e., product pitching, expert review, emailing business introduction, on-line business matching and live business matching). The activities were conducted through a PPP between the five private businesses, the Institute of Business Economics Research and Development (IBERD: a Thai public non-profit institution) to identify an effective way for opening market in the CLMV countries and China.

**Conclusion**

The study revealed that the most important bottleneck was “limited market demand” for the AIPs. Without market and demands, the businesses could not increase their orders of rice and that limited order from the rice farmers. Consequently, the farmers stop growing “special” rice demanded by the businesses. Therefore, the most important activity to initiate, drive and expand Thai rice AIPs supply chain is successful market expansion (domestically and internationally). From, this study, with the aide from IBERD and Department of International Trade Promotion of Thailand, setting up a live business matching meeting was considered the most successful by the businesses as a personal connection was formed and most likely to establish a follow-up meeting as we found in Vietnam market. If live-meeting was not possible due to many reasons, at least, on-line business matching meeting should be performed as the case of Myanmar market. Before entering any market, many due diligences (copyright registration, patent registration, trademark registration, license to sell (both off-line and online), etc.) must be performed especially in China. Regarding technical transfer between the businesses and rice farmers, this study found that the factor governing this issue was “the necessity of rice inherent properties on function and claim of AIPs”. If the inherent properties were necessary for the function and/claim of an AIP, technology transfer would happen. If the inherent properties was not really necessary (happened in highly processed rice AIPs), technology transfer would not happen. If technology transfer could be done by other entities in supply chain especially by public sector, the business would let the public sector took responsible for the technology transfer.

**Reference**

1. General Statistics Office of Vietnam. (2021). Statistical Year Book of Vietnam 2021. Statistical Publishing House. Hà Nội, Vietnam.
2. Narrod, C. A., Roy, D., Okello, J. J., Avendaño, B., & Rich, K. M. (2007). The role of public-private partnerships and collective action in ensuring smallholder participation in high value fruit and vegetable supply chains (No. 577-2016-39178).
3. Rich, K.M.; Narrod, C.A. 2006. Market failures and the role of public-private partnerships to enhance smallholder delivery of high-value agriculture. Paper presented at the symposium on “The New Agriculture in Asia: Smallholders and Contract Farming of High Value Commodities”, 26th Conference of the International Association of Agricultural Economists (IAAE), Gold Coast, Australia, 12-18 August 2006. Nairobi (Kenya): ILR
4. World Bank Group. (2021). Thailand Economic Monitor: Restoring Incomes; Revovering Jobs. World Bank, Bangkok.
5. กนกพร ภาคีฉาย และ เขตต์ เลิศวิวัฒนพงษ์. (2561). แนวทางการพัฒนาธุรกิจข้าวอินทรีย์เพื่อรองรับการเข้าร่วมประชาคมเศรษฐกิจอาเซียนของโครงการ “ผูกปิ่นโตข้าว”. ว.มทรส. (มนุษยศาสตร์และสังคมศาสตร์) 3(1) : 42-54.
6. กิตติพงษ์ ตระกูลโชคอำนวย. (2015). นวัตกรรมการผลิตข้าว การแปรรูปข้าว และการค้าข้าวในประเทศไทย. Journal of Social Development, 17(2), 51–67. ได้จาก https://so04.tci-thaijo.org/index.php/jsd/article/view/41273
7. จิรวัฒน์ วงศ์หาญ, ภัทรพร บุญฤทธิ์, รณยุทธ์ พัฒนาศิริรักษ์, สารินีย์ สิริพันธ์ และ สุดาชลี ยมหา. (2547) การบริหารห่วงโซ่อุปทานข้าวไทย. มหาวิทยาลัยนเรศวร : พิษณุโลก.