

# Strategising ASEAN Agro-Innovation System: The Case of Thailand and Vietnam

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## ***Pun-arj Chairatana***

Chair, Technology & Innovation Management, Graduate School of Management and Innovation (GMI), King Mongkut's University of Technology Thonburi (KMUTT), 8<sup>th</sup> Floor, CB5 Building, 91 Pracha-Utisi Rd., Bangmod, Thung Kru, Bangkok, 10140, THAILAND, E-mail: [pun-arj.cha@kmutt.ac.th](mailto:pun-arj.cha@kmutt.ac.th) URL: <http://www.kmutt.ac.th/gmi>

## ***Bach Tan Sinh***

Policy Researcher, The National Institute for Science and Technology Policy and Strategy Studies (NISTPASS), Hanoi, Vietnam [sinhanh@hn.vnn.vn](mailto:sinhanh@hn.vnn.vn) URL: <http://www.nistpass.gov.vn>

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### **Abstract:**

The conventional agricultural economics technically focuses on the application of economic principles to agriculture in a narrow context, which disregards the social, economic, environmental and technological issues. In broader sense, the agricultural economics includes an applied social science that deals with how production consumers and societies use scarce resources (natural, human and manufacturing resources) in the production, processing, marketing, and consumption of food and fibre products. The later may be similarly perceived as the concept of supply and value-chained management, but still, here, considered to be too narrow.

Another broader concept of which the major focus is on the technological change is the Agro-Technological System (ATS), which is the product of the 1986 international conference on the ATS held in Bologna, Italy. This analytical framework highlights the role played by basis technologies in the development of both the agricultural production apparatus and its relations with the entire production apparatus. It also includes the various economic activities operating within the system and growth in production and exchange relations. It would be the first concept looking the technological change as the main driving force in economic and institutional change in the agricultural sector. For the AIS concept, the relationships between agricultural and non-agricultural sectors on learning, innovate and change is the center of the analysis.

Agriculture, the traditional sector, is rarely studied and analyzed in the context of Innovation System (IS). The world's share of labour in this sector is among the highest. Both developed and developing economies which shares of this sector are significant and trying to cope with the rapid change of the world trade, competition structure, unequal distribution of food and famine. The sector is dynamic. In the conceptual and theoretical perspectives, the NIS concepts have been mostly focused on manufacturing sector and technological innovation in developed and newly industrializing

economies (NIE's)\*. The Agro-Innovation System (AIS) systematises the agricultural sector in holistic approach in order to understand the dynamic agricultural sector and its relationships to other sector in generating growth and prosperity. As agricultural sector is isolated from the communities and recognized as a less dynamic industry in some economies, innovation infrastructure will be focused on the relationships and interdependency between institutional and technological innovation in response to changes, which are the basis and mechanism of the AIS.

In the late 1960's the Association of Southeast Asian Nations or ASEAN was established in Bangkok Today, the ASEAN region has a population of about 500 million, a total area of 4.5 million square kilometers, a combined gross domestic product of US\$737 billion, and a total trade of US\$ 720 billion. Agriculture acts as a major absorptive sector for many countries in this region. Thailand and Vietnam is good example for advance and catching-up agro-industrialising based nations.

Thailand's weak and fragmented national innovation system (NIS) is in the process of transforming its development policies. Much greater attention is now given to the issue of building up longer-term competitiveness in the real sector. Global niche markets and strategic sectors have been identified, and the vision and mission for these sectors have been clearly stated by the government and acknowledged by government agencies and the private sector. The food processing industry was once the country's biggest manufacturing industry. Thailand earns about US\$10 billion annually for food manufacturing. The share of employment for the agriculture sector is 60% of the national workforce. It also plays a crucial social role. Key products are canned pineapple and frozen poultry

The food-processing sector is also a large and rapidly growing industry in Vietnam's economy. In 1997, the value added in the food processing sector is estimated to be about US\$ 2.0 billion, this represents about 8.8 percent of GDP and 35.5 percent of industrial value added. Furthermore, the contribution of food processing to GDP appears to be growing. In 1991, food processing represented just 6.7 percent of GDP, but over the period 1991-1997, value added in food processing has grown 14.0 percent annually, while GDP has grown only 8.9 percent annually. Furthermore, the growth in the food processing has even outpaced, by a small margin, the industrial sector in general.

This article proposes that the concept of innovation system is flexible to apply to the traditional sector by expanding the boundary of analysis into the more holistic approach. To understand the AISs in the two latecomer economies with different stage of social and economic development and platform, the authors developed an analytical framework to compare the agro-food processing industries in Thailand and Vietnam.

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\* See Nelson R. R. (1993)