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## AGRICULTURE IN THE SOUTHEAST ASIAN COUNTRIES UNDER GLOBALIZATION

**Summary:** Rapidly growing global population, expanding domestic and global markets, institutional innovations in markets, finance, and collective action and revolution in information technology offer opportunities to use agriculture to promote development, instead of being an instrument for industrialization through structural transformations. The functions of rural areas for development may include growth, poverty reduction, food security and providing environmental services.

Rural areas of South and East Asian countries remain home for a huge number of people living in extreme poverty. For this reason, it is crucial to focus on institutional conditions conducive to the creation of new jobs in agriculture answering the challenges and using opportunities given by globalization.

The article outlines the issues facing Southeast Asian agriculture under the globalization and attempts to provide a useful framework to design a strategy for rural-based development constructed on green growth strategy recommended by OECD.

**Keywords:** agricultural policy, globalization, rural development, Southeast Asian countries.

### Introduction

In the last few years the conception regarding the role of agriculture in economic development has changed. From a passive partner in the development process, agriculture has evolved to an active and co-equal partner with the industrial sector, especially in case of low-developed countries.

The growing global population, expected to hit 9 billion people by 2050, will require a 70 percent increase in food production [FAO, 2009]. This is a reason for a change of the accepted wisdom in development economics – a decline in the

share of agriculture in the economy. Today, agriculture may trigger GDP growth in early stages, reduce poverty and narrow income disparities, provide food security, and deliver environmental services. [Byerlee, de Janvry (eds.), 2007]. The debate still concerns the question how to restore ecological functions to rural areas, remake agricultural activity into a multifunctional process that provides such public goods as food, functional landscape, ecosystem, increased biodiversity or economic development, and make agriculture in low-income countries benefited from globalization [Smil, 2001].

Economic globalization, which means lowering of economic borders between nations, affects directly or indirectly all areas of each economy [Dunning, 1999]. The agricultural sector doesn't avoid the impact. Moreover, many market failures in agriculture arise from high transaction costs connected with asymmetric information and imperfect contract enforcement [Akerlof, 1970; Williamson, 1985]. Developing countries may counteract this problem by creating clusters [De Oliveira, 2008].

The purpose of this article is to formulate an effective rural-based development policy for low-income Southeast Asian countries under globalization as an appropriate channel to connect small family farms with wide national and international markets demanding new, high-value commodities. The presumption is that agricultural productivity growth is crucial for overcoming widespread poverty and for stimulating growth in other parts of the economy. The engine of such development is a technological progress including improvements both in production and management, and in human capital – which can be accelerated by clusters emerging in rural areas.

The first part of the article discusses the change in the role of rural areas in the development. The second part presents the concept of the Green Growth Strategy as the answer to recent challenges in the global economy. The final part contains a proposition of a framework to design a strategy for rural-based development in Southeast Asian countries constructed on green growth strategy recommended by OECD.

## **1. The role of agriculture in the development**

The traditional approach to the role of agriculture in the development is based on the national accounts data showing the agricultural productivity gap. As in other regions, agricultural sector in East and South Asian countries creates much lower value added than non-agricultural sectors and at the same time em-

employs greater amount of workforce (Table 1). The most important causes of the productivity gap between agricultural and other sectors are: differences in human capital [Caselli, Coleman, 2001] or large home production in agriculture [Gollin, Parente, Rogerson, 2004]. It suggests that labour may be misallocated across the sectors according to its low marginal product in agriculture. In addition, the theory and empirical evidence indicate that the relationship between farm size and factor productivity is inverse, especially when land and labour markets are imperfect [Byerlee, de Janvry (eds.), 2007]. One of the suggested ways to improve the aggregated productivity in the economy is to reallocate workers out of the underproductive sector.

**Table 1.** Employment in agriculture in Southeast Asian countries

Country	Employment in agriculture (% of total employment)		Value added in agriculture (% of GDP)		Agriculture value added per worker (constant 2005 USD)	
	2010	2012	2010	2013	2010	2013
Brunei	.	.	1	1	80,21	83,87*
Cambodia	54	51	36	36	499	524
Indonesia	38	35	15	14	910	1,018
Lao PDR	.	.	33	28**	483	476**
Malaysia	13	13	10	9	8,397	9,687
Myanmar	.	.	.	.	.	.
Philippines	33	32	12	12**	1,081	1,129**
Singapore	.	.	0	0	35,691	36,625
Thailand	38	40	12	12	1,028	1,166
Timor-Leste	51	.	20	17*	409	320*
Vietnam	48*	47	19	18	446	476

\* Data for 2011.

\*\* Data for 2012.

Source: [www 1].

Recently, a much better understanding of the complimentary relationship between agriculture and industry sectors has been obtained. The effects of interaction between technical, economic, and social factors on agricultural development have become clearer. However, the potential of agriculture as a growth sector was revealed by the dynamism of the green revolution in Asia during the late 1960s and early 1970s [Diao et al., 2007, p. 5].

The present wave of globalization and experiences of global economic crisis make the development of agriculture, also in Southeast Asian countries, likely to be associated with the OECD's Green Growth Strategy [OECD, 2013]. The strategy is narrower than sustainable development, which recognized that growth must be both inclusive and environmentally sound to reduce poverty and build prosperity for the future generations as well. The sustained development con-

tains three pillars: economic growth, environmental administration, and social inclusion. Nonetheless, the green growth strategy still encompasses economic, environmental and social dimensions of development.

## **2. The green growth strategy**

This new growth path highlights the necessity to protect the environment and use in a sustainable way scarce natural resources, and simultaneously the need to raise the living standards and to alleviate poverty. It focuses on sources of economic growth that are consistent with resilient ecosystems. The green growth strategy encompasses policies that should increase the productivity of natural resources, thus relating mainly to the agricultural sector [Diakosavvas, 2013]. They should [OECD, 2013, p. 1]:

- favour the transition to a low-carbon and resource-efficient economy,
- improve the management of natural assets,
- raise the environmental quality of life,
- create economic changes in consumption and production.

Most of the green growth strategy's objectives result from international agreements, e.g. EU requirements. Approaches vary across countries. Regulation, promotion of low emission technologies, promotion of renewable energies and improvement of energy efficiency are the most common policies.

Countries on different stages of development are supposed to be able to apply the green growth strategy, because of its flexibility. But green-growth policies may affect welfare positively rather in the long term, while generate transition costs and hamper strategy's implementation in the short term. Innovation and technology transfer are key to foster green growth. The main condition is institutional and governance capacity to implement green growth policies across ministries, public agencies and between levels of government involved in policy making.

One of the most important aspects of green growth strategy is an optimal allocation of scarce resources. According to this approach government supports in the form of agriculture, fishery and energy subsidies, hampers infrastructure investments, rises the pressures on environment and – what is essential for developing countries – fails to efficiently protect the poor. The most harmful types of agricultural support is support based on process and output levels. Experiences of developed countries show that it is very difficult for governments to withdraw from such support because of strong political opposition [OECD, 2013, p. 13].

To evaluate the success of actions taken within the green growth strategy countries may apply the OECD green-growth indicator framework including e.g. production-based CO<sub>2</sub> productivity (which is measured by GDP generated per unit of CO<sub>2</sub> emitted from fuel combustion), renewable energy supply, number of people living under severe water stress or population connected to public sewage treatment. Nonetheless, a principal disadvantage of the framework is the lack of systematic ex ante and ex post assessments and the existence of only few quantitative measurements to assess the policies impact on various dimensions of welfare [OECD, 2013, p. 8].

Agriculture is a sector which is still on the sidelines actions under the green growth policies without an overall agrarian strategy in many OECD countries. Only few countries, e.g. EU members in Rural Development Programmes 2007-13, have been developing instruments and initiatives consistent with aims of green growth strategy in agriculture [OECD, 2013]. A range of policy instruments, which can support activities related to green growth in the sector, contains traditional regulatory or control approaches and wider economic, informational, co-operation or educational instruments. They form two groups: instruments aimed at “green” and instruments aimed more at “growth” dimension of the process. The strategic objectives may include supporting a competitive business sector in rural areas, using agri- and forestry raw materials for renewable energy production, extending the area of land under organic farming and reducing the use of harmful pesticides. Nonetheless, the essential condition of the green growth strategy success still remains considerable investment in agricultural research and development that is convertible into the increase in productivity, sustainability, resource-use efficiency and competitiveness [Diakosavvas, 2013, p. 3-5].

### **3. Green growth strategy for Southeast Asian countries**

After World War II, many developing countries introduced the import-substitution industrialization strategy of development. Its aim was to reduce the competition from imports and protect large-scale domestic industries. But the victims of the strategy were consumers, unprotected small- and medium-scale industries, and agriculture. Main instruments of the strategy – tariffs and quotas, reduced the competition from imports and at the same time increased domestic prices. The scope for rural-based development was narrowed [Hayami, 2007, p. 59].

Unlikely during the post-war period, present trade liberalization and domestic deregulation in developing countries in Southeast Asia facilitate the increase

in labour-intensive products and agricultural commodities' production but located disproportionately in major cities. The main reason to locate industries near the urban centres remain high costs of formal court procedures and thus high transaction costs of contracts between rural producers and urban exporters. The condition of the wide dispersion of industrial activities to rural areas is the development of community-based trade networks, which in Southeast Asian countries is still too slow [Hayami, 2007, p. 61]. However, rural entrepreneurs try to use the community relationships to overcome problems of imperfect rural markets which in low-income economies are subject to imperfect information and high risk.

Economic globalization has caused freer movement of goods and services across borders. In many cases national governments adopt a strategy of giving access to the dominant economy in the region [Duning, 1999]. Such strategy results from the process of economic integration based on creating of free trade area and is strongly supported by multinational enterprises [Rugman, 1990].

Free trade and foreign direct investments have forced rural people to specialize in primary commodity production and have given raise to the dominance of primate cities in economic systems of developing countries. But it is possible to locate many industrial activities in rural areas, especially those, which are labour-intensive and characterized by weak economies of scale. The condition of success is the presence of domestic trade networks linking rural producers to foreign demands. Such rural-based industrialization was observed in Japan (1868-1912), and balanced rural-urban growth in Taiwan and China in a post-war period. Japanese outsourcing system organized by local traders, eventually transformed into the modern subcontracting system, helps organizing small- and medium-scale rural enterprises into local industrial clusters. The clusters facilitate meeting national and international demand [Hayami, 2007, p. 59-63]. The same mechanism may enable organizing farmers into local rural clusters.

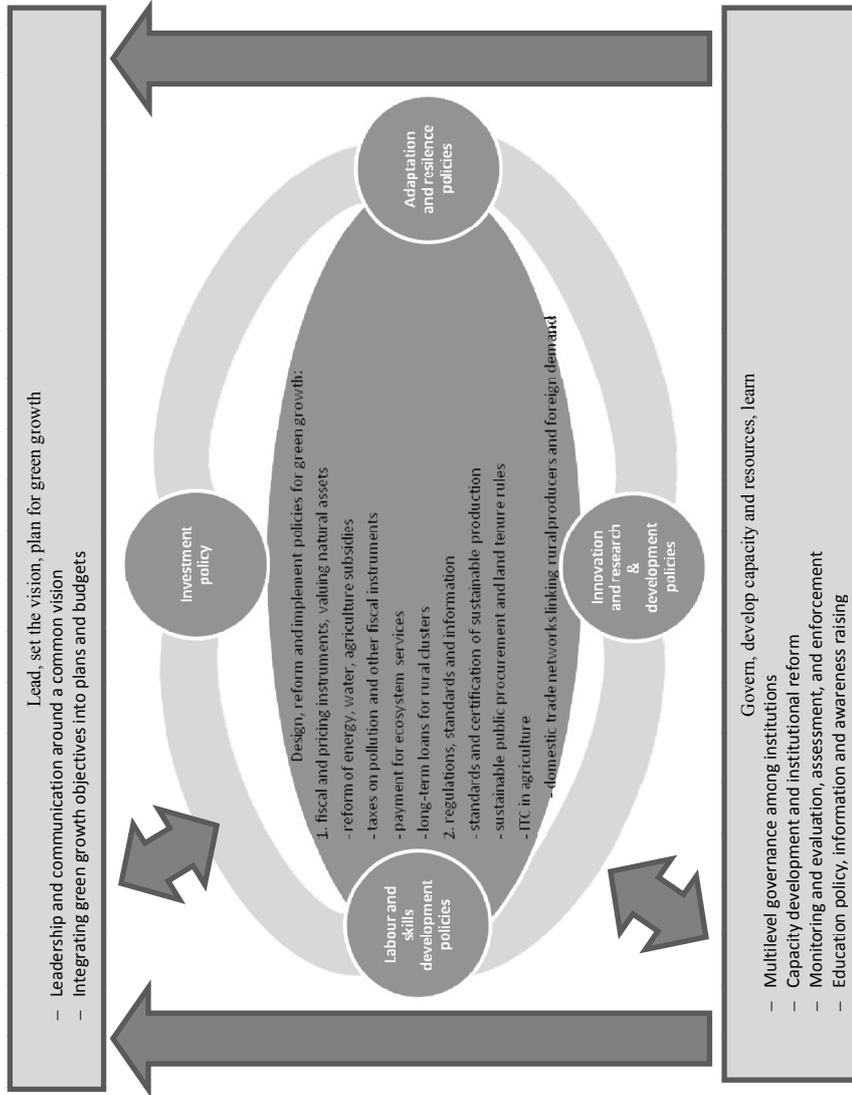
Under globalization, Southeast Asia countries focus on creating adequate links between farm producers and emerging international demand for agricultural products. But this process evolves efficiently mostly in case of storable agricultural products and of which contractors can easily verify the quality. This means insignificant information asymmetry. The severe information asymmetry may remain the main obstacle in the field of quality standardization of rural commodities as vegetables, fruits and flowers. Southeast Asia countries may solve the problem by more closely coordination of farm-level production with the needs of marketing and processing. The efficiency of the coordination depends on the kind of commodity and the destination market (national or international) [Hayami, 2007, p. 63-64].

The instrument that facilitates meeting international demand is contract farming. The traditional approach to achieving sufficient coordination between farm production and processing and marketing for the delivery of tropical agricultural products to international markets was based on plantation system. But high cost of supervising hired wage labour made the system increasingly more inefficient. The contract farming assumes that an agribusiness enterprise or a cooperative contracts with small farms and guarantees supplies of farm-produced raw materials. The example of successful contract farming is the pineapple processing by multinational agribusiness in Thailand, which made the country the top exporter of pineapple products in the world. Some reported failures of the contract farming usually stemmed from the difficulty in enforcing contracts with a large number of small-scale farmers. Thus, the success of contract farming may depend on trust between farmer-agents and agribusiness principals [Hayami, 2007, p. 65].

Small- and medium-scale farmers may lack the resources to comply with strict standards for safe and traceable food on global markets. Wider access to information communication technologies (ITC) may lift some of these barriers [IBRD/WB, 2011, p. 4].

The implementation of green growth strategy, as one of consequences of globalization, impose additional responsibilities on national governments. In such case appropriate regulation may prevent a shift in polluting production or restriction of competition between firms. Southeast Asian countries make efforts to achieve economic growth and development and at the same time to ensure that natural assets continue to provide the ecosystems services. This requires policy changes into green-growth policies. Institutional settings such as: mechanisms co-ordinating work of ministries, regional and local-level administration in policy making, may support green growth. Among developing countries some steps in the direction of coordinated efforts have been achieved in Vietnam, where Ministry of Planning and Investments was established [OECD, 2013, p. 2-6].

The green growth strategy for Southeast Asian countries may combine entrepreneur-led and government-assisted approach (Figure 1). Nonetheless, the creation of competitive markets and abolition of the government's economic controls remains crucial for the success of the strategy. To stimulate and accelerate the development of agriculture the training programs introducing new knowledge from more advanced countries are recommended. If the public campaigns and school education help to increase the awareness of the importance of proper knowledge of management, training programme will be commercially offered by the private sector, which will reduce the room for corruption.



**Figure 1.** Model of national green-growth strategy framework for developing countries in the global environment with the extension to agriculture

Source: OECD [2013, p. 7].

To provide low-interest loans and thus help to construct agricultural clusters rural development banks may be used. They may be formed on the model of industrial development banks (IDBs) as quasi-governmental institutions assisting new rural enterprises by providing long-term loans and a wide range of consultancy services [George and Prabhu, 2003]. In order to avoid corruption it is necessary to maintain the institutions independent from political forces at the operational level. IDBs played a positive role in some high-performing East Asian countries [World Bank, 1993].

### **Concluding remarks**

The appropriate channel to connect small family farms with wide national and international markets demanding new, high-value commodities may consist of the green growth strategy recommended by OECD strengthened by a competition-oriented policy, promotion of rural clusters and investment in human capital. Due to the limited scope of green-growth framework, the main challenge remains the coordination of policies and development of indicators and instruments to monitor implementation progress.

Waiting for agriculture in low-income Southeast Asian countries to develop without any assistance may be critical for million rural people living in extreme poverty. Probably, rural poverty will remain dominant for several more decades despite massive rural-urban migration. Thus, implementing competition-oriented and government-assisted green growth strategy could be better solution.

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## ROLNICTWO W AZJI POŁUDNIOWO-WSCHODNIEJ W WARUNKACH GLOBALIZACJI

**Streszczenie:** Takie zjawiska i procesy, jak dynamiczny wzrost liczby ludności na świecie, ekspansja krajowych i globalnych rynków, rynkowe i finansowe innowacje instytucjonalne, działania zbiorowe oraz rewolucja informatyczna, umożliwiają promowanie

rozwoju także poprzez sektor rolny, który często stanowił jedynie instrument w procesie industrializacji osiąganey dzięki przemianom strukturalnym. Współcześnie obszary wiejskie mogą stanowić istotny element w procesie wzrostu gospodarczego, ograniczania ubóstwa oraz zapewnienia bezpieczeństwa żywnościowego.

Obszary wiejskie Azji Południowo-Wschodniej są zamieszkiwane przez ogromną liczbę osób żyjących w skrajnym ubóstwie. Z tego też powodu, jak również w obliczu wyzwań i szans stwarzanych przez procesy globalizacyjne, kluczowego znaczenia nabiera stwarzanie instytucjonalnych warunków sprzyjających tworzeniu nowych miejsc pracy w rolnictwie.

Celem artykułu jest wskazanie uwarunkowań globalizacyjnych rolnictwa Azji Południowej i Wschodniej, jak również przedstawienie ramowej strategii dla rozwoju opartego na rolnictwie. Podstawą zaproponowanej strategii jest „Strategia zielonego wzrostu” opracowana przez OECD.

**Słowa kluczowe:** polityka rolna, globalizacja, rozwój obszarów wiejskich, kraje Azji Południowo-Wschodniej.