

Policies for balanced development of LDCs

Least developed countries (LDCs) in the Asia-Pacific region face severe structural impediments to growth and sustainable development.¹ The majority of their population makes living from agriculture, including horticulture, livestock, fisheries and forestry, and the development of that sector is a key priority of action for their inclusive and sustainable development. Given their particular situation, LDCs in Asia-Pacific should consider an integrated strategy that uses intersectoral linkages and labour movements between agriculture and agro-industries to promote balanced and inclusive development.

Dominance of agriculture in the Asia-Pacific LDCs

Any strategy for balanced development of LDCs has to be mindful of the key role played by the agricultural sector. On average, agriculture accounts for 28% of total output and 58% of employment in the Asia-Pacific LDCs.

It is important to emphasize that agriculture is not just staple food crops. In Asian LDCs, agriculture is characterized by different activities. On average, as shares of production value, agriculture is comprised of 35% cereal crops, 39% other crops (fruits, vegetables, roots and tubers, seeds, spices, etc.), 21% livestock and 5% aquaculture. In Pacific LDCs, other crops dominate, particularly coconuts and roots and tubers, accounting for over 80% of the total production in value.²

Given the importance of agricultural activities for LDCs in Asia-Pacific, it would be expected that a large share of their land was dedicated to agricultural production. However, Asian LDCs have in average a lower share (32.1%) of their land dedicated to crops and pasture than the global average (37.6%) and the average for lower (38.6%) and middle income countries (44.3%). The exceptions are Afghanistan and Bangladesh with 58.1% and 70.1% of their land dedicated to agriculture respectively. On the other hand, the average share of land dedicated to food crops is in general higher in Asian LDCs (18.1%) than the average for lower (9.8%) and middle income countries (12.2%).³

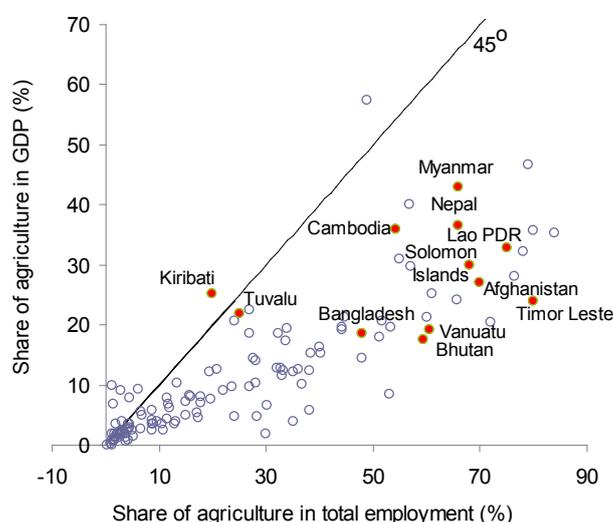
Investment in agricultural inputs (irrigation, machinery and fertilizers) is generally very low in Asia-Pacific LDCs. For example, the number of tractors per 100 sq. km of arable land in Afghanistan (1.1), Cambodia (6.5) and Lao People's Democratic Republic (7.7) is less than half of the average in low income countries (15.5). Similarly, fertilizer consumption per hectare of arable land in Afghanistan (4.3 kg), Myanmar (6.3 kg), and Bhutan (11.5 kg) is well below the average consumption

in low income countries (25.2 kg). Yet land productivity is reasonably high. Cereal yield for Asia-Pacific LDCs is on average 3,000 kg per hectare, which is almost 50% higher than the average yield of low income countries (1,982 kg per hectare) although still lower than the global average (3,622 kg per hectare).⁴

Structural Transformation

In terms of structural transformation, the shares of agriculture in GDP and employment have declined in most Asia-Pacific LDCs, but the decline in employment share has been slow, resulting in low productivity per agricultural worker – a major factor for high prevalence of poverty. Figure 1 shows the association between the shares of agriculture in GDP and employment. A great majority of countries are located below the 45-degree line, indicating that across the world the share of agricultural employment is generally higher than the share of agriculture in GDP. The exceptions are Kiribati and Tuvalu, the least populous of the group, with 102

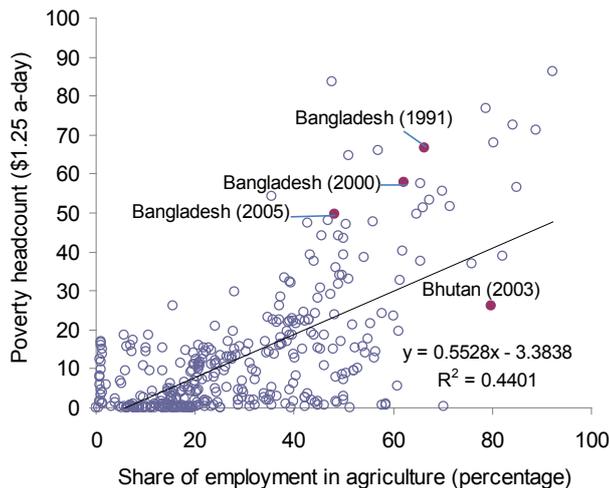
Figure 1. Share of agriculture in GDP and employment, 2010



Sources: ESCAP based on World Bank, World Development Indicators Database. (Accessed 28 January 2014).

Figure 2.

In general, poverty is prevalent in countries where majority of workers are in agriculture



Sources: ESCAP based on World Bank PovcalNet and World Development Indicators Database. (Accessed 24 April 2014).

thousand and 11 thousand people respectively,⁵ where agriculture represents around 20% of employment and GDP.

In general, poverty is prevalent in countries where the greatest majority of the working population are in agriculture (figure 2). For example, in Bangladesh poverty reduction has followed closely the movement of workers out of agriculture – In 1991 the poverty rate was 66.8% and the share of workers in agriculture was 66.4%; in 2000, poverty rate reduced to 57.8% and the share of agricultural workers declined to 62.1%; and in 2005 poverty stood at 49.8% of the population while 48.1% of workers were in the agriculture.

The low labour productivity of agriculture in LDCs is such that large shares of the population engaged in the sector practice subsistence agriculture and are able to produce only the bare minimum for their survival. In Timor-Leste, for example, of those who work in agriculture, three-fourths are subsistence farmers. In Lao People's Democratic Republic, almost a third of the farm households practise subsistence agriculture.⁶

Structural transformation of employment out of agriculture is a key requirement for the development of agriculture and increase in the standard of living in rural areas. The move out of the agricultural sector usually represents a shift from low to more productive economic activities in industry and services, which further broadens the market for agricultural products and hence contributes to income growth. Fewer workers in agriculture also create incentives for using technology to increase the productivity per worker in that sector.

Integrated strategy for balanced development

In principle, there are two ways to promote structural transformation: through labour push and labour pull strategies. The labour push strategy points to the following chain of dynamic events: improvements in

agricultural technology lessen the labour intensity, but increase incomes in that sector; higher incomes in agriculture changes consumption patterns of the workers who remain in that sector and increases their demand for manufactured goods; this, in turn, increases labour demand in manufacturing, and helps absorb surplus labour in agriculture and further increases agricultural productivity.⁷ The second way to improve agricultural productivity is the “labour pull” strategy: expansion of the manufacturing sector and improvements in manufacturing technology increase wages, pulling labour into that sector and reducing labour surplus in agriculture, which, if sustained, eventually would trigger increases in agricultural productivity. The labour pull channel can then be viewed as a roundabout way of increasing agricultural productivity by first promoting increases in manufacturing productivity.⁸

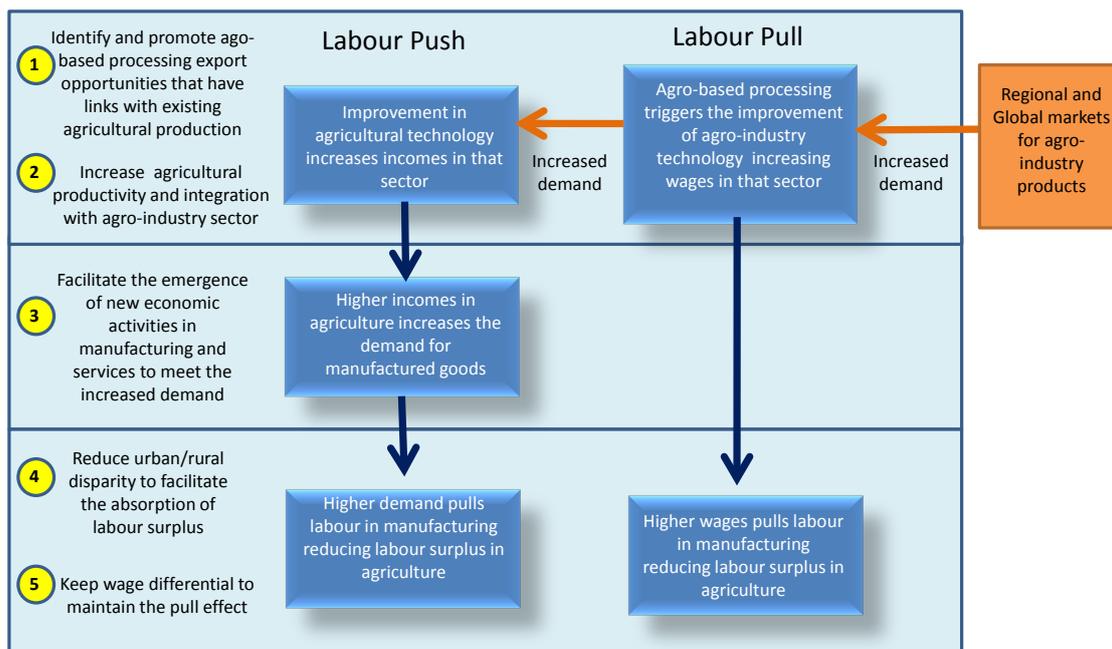
There is no consensus on which is the best method: labour push or labour pull. Some empirical evidence, based on data from 12 industrialized economies that have completed their structural transformation out of agriculture, suggests that both channels play a role that varies over time and with a country's stage in structural transformation.⁹ Results also suggest that there is a “first pull, then push” tendency indicating that the “pull” channel mattered more for countries in their early stages of structural transformation – when the share of employment in agriculture was above 40%. This finding has great implications for the choice of strategy for agricultural development in the Asia-Pacific LDCs given that in these countries, except for Kiribati and Tuvalu, the proportion of workers engaged in agriculture is above the suggested threshold of 40%. Similar analysis conducted by ESCAP focusing on Asia-Pacific countries confirms that both pull and push channels play a role.

If the interlinkages between agriculture and manufacturing, especially agro-based processing activities, and the role of demand are taken into consideration, both pull and push factors could be put to work in promoting balanced and inclusive development in the LDCs of the region. Policies that facilitate the emergence of productive economic activities in dynamic industries and services that use agricultural products as inputs, and that at the same time raise productivity in both agriculture and manufacturing, combine the benefits of pull and push channels and have the potential of creating a virtuous cycle. The integrated strategy for balanced development is illustrated in figure 3, which is advocated time and again by ESCAP.¹⁰

Such a strategy is composed of five steps

1) Identify and promote export opportunities in agro-based processing activities

First, government and the private sector should identify and promote export opportunities in agro-based processing activities (agro-industries) that have links with existing agricultural production. Perhaps the most difficult aspect in operationalizing such a strategy is the identification of the export opportunities in agro-industries. These are economic activities that do not exist in a country but that have the potential for becoming a new source of comparative advantage.



In that regard, ESCAP analysis suggests that particularly promising potential new agro-industries in Asian LDCs are: cereal, flour, starch, milk preparations (Afghanistan, Bhutan, Cambodia, Lao People's Democratic Republic, Myanmar, Nepal, and Timor-Leste); meat food preparations (Bangladesh, Bhutan, Cambodia, Lao People's Democratic Republic, Myanmar, and Nepal); fish food preparations (Bangladesh and Nepal); vegetable food preparations (Bangladesh, Cambodia, and Nepal); animal feeding preparations (Cambodia and Nepal); beverages (Lao People's Democratic Republic); and extracts of coffee (Timor-Leste). In Pacific LDCs the potential agro-industries that could generate backward linkages with existing agricultural specializations are: vegetable, fruits and nuts food preparations (Kiribati); cocoa preparations, flour and starch products, fish food preparations, fruit juices and vegetable food preparations (Solomon Islands); flour and starch preparations, and sugars and sugar confectionery (Tuvalu); meat food preparations and flour, starch, milk products (Vanuatu).¹¹

2) Facilitate the increase of agricultural productivity and integration with agro-based processing sector

The second step is to increase agricultural productivity to meet the demand created. As highlighted in the ESCAP Survey 2012, the main drivers of increased agricultural productivity in the context of LDCs are the dissemination and application of simple new agricultural technologies that are not capital intensive. In that connection, the Network for Knowledge Transfer on Sustainable Agricultural Technologies and Improved Market Linkages in South and Southeast Asia (SATNET), a project funded by the European Union and implemented by the Centre for Alleviation of Poverty through Sustainable Agriculture (CAPSA), ESCAP's regional institution, in collaboration with partners is creating a portfolio of sustainable agriculture

technologies and best practices useful to poor and smallholder farmers.

In addition to dissemination of sustainable agriculture technologies and best practices, increasing agricultural productivity would also require investment in infrastructure to reduce transaction and transport costs, minimize post-harvest loss, provide storage/refrigeration, and offer better marketing facilities. Some of the infrastructure such as rural roads could be built using labour-intensive techniques that would also help reduce labour surplus in agriculture and foster inclusive development.

3) Facilitate the emergence of new economic activities

Higher productivity in agriculture raises rural incomes and shifts consumption patterns towards manufactured goods. The third step in the integrated strategy is the facilitation of the emergence of new economic activities to meet the demand of increased agricultural and agro-industry workers' incomes. This channel of demand from the agricultural and agro-industry sectors towards manufacturing is more relevant for the most populous Asian LDCs: Bangladesh, Cambodia, Nepal and Lao People's Democratic Republic.

Government and the private sector should jointly identify the bidding constraints for increasing private investment in new economic activities. The ESCAP Survey 2011 highlighted some of the policy priorities for LDCs to build productive capacities and facilitate the diversification of their economies. These policy priorities include maintaining a macroeconomic environment focusing on expanding employment opportunities, creating required productive infrastructure, providing support services to small and medium-sized enterprises (SMEs) in technology,

marketing and export market development, and providing financial services and products, especially for SMEs. Exchange rate policies also play an important role in terms of structural change between tradable and non-tradable sectors, therefore they should also be considered to facilitate the emergence of a diversified economy in LDCs.

4) Reduce rural-urban disparity to facilitate the absorption of labour surplus

The fourth step is to address disparities between urban and rural populations to facilitate the transition of workers from agriculture to manufacturing. The higher the disparities, the lower the capability of people to make the transition and the lower the human capital of workers released from subsistence agriculture, which reduces their prospects of finding jobs in industry and services.

Closing these disparities would require renewed investment in rural development. ESCAP has argued for forward-looking macroeconomic policies to address these developmental gaps. Estimates of the required public investment to provide a set of policies to enhance inclusiveness, which includes universal basic social services in education and health but also provision of an employment guarantee for a limited number of days (100 days) in a year, income security to older persons and persons with disabilities and ensuring energy for all by 2030, suggests that LDCs will need significant external assistance from development partners to complement their domestic resource mobilization efforts.

5) Keep wage differential to attract labour surplus out of agriculture

The fifth step is to tackle the challenge of surplus labour in subsistence agriculture. LDCs are characterized by a “dual economy” with large share of workers on subsistence agriculture, which holds the wage rate in manufacturing at a lower level. Although this reduces wage costs in manufacturing and may be seen as an advantage for firms trying to compete in the international market based on cheap labour, it in effect puts to a halt the structural transformation out of agriculture. Low wages in manufacturing reduce the “pull effect” of attracting the labour surplus out of agriculture.

Keeping manufacturing wages low also puts to a halt the domestic demand channel for additional increases in productivity in that sector. Increasing incomes change the pattern of consumption of the workers towards high value added products and, in more populous LDCs, create the opportunity for increasing productivity and diversification of the economy. Without that domestic

demand channel, LDCs can only rely on exogenous demand through trade. Governments should use wage policies to make sure that workers receive the benefits for their increase in productivity. Otherwise, all productive gains will be accrued only by the consumers in their trading partners.

In summary, agriculture should play a larger role in closing development gaps in the LDCs in the Asia-Pacific region. But countries should avoid the trap of focusing only on increasing productivity in agriculture as if there would be no linkages with the other economic sectors. Similarly, focusing exclusively on increasing productivity in manufacturing and services and completely neglecting agriculture is an approach doomed to increase the already large rural-urban inequalities. A better strategy is to consider agricultural development in an integrated manner that is mindful of agricultural and agro-industries linkages and the need to promote structural transformation of the economy.

Endnotes:

¹ There are 12 countries in the Asia-Pacific region designated as LDCs: Afghanistan, Bangladesh, Bhutan, Cambodia, Kiribati, Lao People’s Democratic Republic, Myanmar, Nepal, Solomon Islands, Timor-Leste, Tuvalu and Vanuatu.

² ESCAP based on FAO Statistics 2013, Value of Agricultural Production dataset and FAO Fishery and Aquaculture Global Statistics.

³ ESCAP based on World Bank, Agriculture and rural development data.

⁴ Ibid.

⁵ ESCAP Online statistical database.

⁶ ESCAP based on data from Lao Agriculture Census 2010/11, Lao People’s Democratic Republic Agriculture Master Plan 2011-2015, and Ministry of Planning and Investment National Socioeconomic Development Plans.

⁷ The labour push strategy may be traced back to the classical four stages theory presented by Adam Smith and by Anne-Robert-Jacques Turgot in the 18th century. Following that tradition, in the 1960s W.W. Rostow proposed that increases in agricultural productivity are a necessary condition for economic take-off.

⁸ Famous examples of models that follow the labour pull tradition is the dual economy model presented by Arthur Lewis in the 1950s and the two sector model proposed by Harris and Todaro in the 1970s.

⁹ Alvarez-Cuadrado, Francisco and Markus Poschke, “Structural change out of agriculture: labor push versus labor pull”, *American Economic Journal: Macroeconomics*, No. 3 (July 2011), pp. 127–158.

¹⁰ See *ESCAP Economic Survey of Asia and the Far East 1964 and 1969*.

¹¹ ESCAP based on Clovis Freire, “Strategies for structural transformation in South Asian countries”, *Seoul Journal of Economics* 26, No. 3 (2013), pp. 311-336, and data from the COMTRADE, FAO STATs Food and Agricultural commodities production and FAO Fishery and Aquaculture Global Statistics.

The MPDD Policy Briefs aims at generating a forward-looking discussion among policymakers, researchers and other stakeholders to help forge political will and build a regional consensus on the needed policy actions and pressing reforms. Policy Briefs are issued without formal editing. This issue has been prepared by Clovis Freire of the Macroeconomic Policy and Development Division, ESCAP. For further information on the policy brief, please contact Dr. Anis Chowdhury, Director, Macroeconomic Policy and Development Division, ESCAP (escap-mpdd@un.org)