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Review Article

The Role of Economic Development and Management in Agriculture: a Brief Review

Vahid Shokri, Mohammad Reza Yousefi*

Islamic Azad University, Qaemshahr Branch, Qaemshahr, Iran

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ABSTRACT

Agriculture has a key role to play in reducing poverty and hunger in many developing countries. About 75% of the world's poor live in rural areas and most are dependent on agriculture and related activities in the rural economy. For this reason the benefits for developing countries' farmers have been shown to be substantial if OECD member countries reformed their agricultural policies. The issue of how OECD members' agricultural policies join-up with their development commitments and policies requires decision makers' undivided attention as the UN General Assembly meets to review progress in meeting the Millennium Development Goals and as trade negotiations progress under the Doha Development Round. At the global level the dependence of the developing world on agricultural exports creates many problems. World demand for these products tends to be both income and price inelastic. As a result, for many crops, of which the supply is also inelastic in the short-run, the growth rate of export earnings is held to a relatively low level and prices fluctuate. Efforts at diversification and commodity stabilization can be successful only if undertaken under viable international agreements. Empirical evidence on the terms of trade of the developing vis-à-vis the developed country leaves at least a presumption that they are not improving. This paper has reviewed the economic and management literature related to the role of agriculture in development.

INTRODUCTION

Two important intellectual developments since World War II have only recently been integrated. The first is the scientific revolution in agriculture, which has transformed the potential productivity of land and rural people from subsistence levels using traditional techniques to levels producing substantial commercial surpluses that are available to feed rapidly rising non-farm populations. The second is the growing understanding of the role of markets in the process of economic development and the steps governments must take to foster that role. In the last decade of the twentieth

century there is now a general agreement that agricultural development requires a market-oriented strategy capable of stimulating rapid technological change in the agricultural sector (Clark, 1940).

The agricultural sector continues to play a crucial role for development, especially in low-income countries where the sector is large both in terms of aggregate income and total labor force. Having been a key preoccupation of developing country governments, donors and the international community during the 1960s and 1970s, agriculture disappeared from the development agenda in the 1980s and 1990s, only to reappear in the first decade

of the 21st century because of neglect and underinvestment (Dethier and Effenberger, 2012). Just as information and knowledge are changing the nature of our economy, they are also changing the practice of local economic development. Companies are changing how they operate and what drives their location decisions. Local economic development strategies must adapt to these changes. In addition, we are gaining a better understanding of how information and knowledge affects both the economy in general and the economic success of specific localities. As a result, there is a rise in new theories of economic development, such as economic clusters, that can be useful in guiding local economic development activities (Jarboe and Alliance, 2001). This paper has reviewed the economic and management literature related to the role of agriculture in development.

The role of agriculture in development

Developing economies have generally been described as dual economies with a traditional agricultural sector and a modern capitalist sector. Productivity is assumed to be lower in agriculture than in the modern sector. The canonical model was put forward by Lewis (1954) and subsequently extended by Ranis and Fei (1961).

The fact that there are important linkages between the traditional and modern sectors in developing countries makes agricultural growth an important instrument for decreasing poverty. The contribution to poverty reduction takes place directly, through the effects of agricultural growth on farm employment and profitability, and indirectly because increases in agricultural output induce job creation in upstream and downstream non-farm sectors as a response to higher domestic demand. Potentially lower food prices increase the purchasing power of poor consumers. The magnitude of these effects for poverty reduction depends on the specific circumstances of an economy. For example, if technological progress in the agricultural sector is labor-saving, farm employment might not necessarily increase (Irz *et al.* 2001).

Although various theoretical models suggest opposing roles for agriculture in development, they do not necessarily contradict each other. The models are derived under different economic assumptions (e.g. openness to trade). Therefore, it is not surprising that they derive different policy implications. Because developing countries differ with respect to their economic environments, the role of agriculture for development might be re-evaluated in each specific case. This is in line with the 2008 World Development Report (World Bank, 2007).

Agricultural trade policy

A frequently cited essential ingredient in the recipe for agricultural success is access to world markets unfettered by too much interference either by home

country or trading partner governments (Anderson and Valenzuela, 2008). The institutional approach to establishing and implementing a technology policy remains uncertain and critically needed. The commitment to the concept of Belize Institute for Agricultural Research and Development (BIARD) which was intended to address the weakness that research was scattered among different government Ministries and private institutions with little capacity to generate demand driven technologies remains unclear. In most cases, research continues to operate independently with little involvement of stakeholders in the identification of research priorities, implementation, testing and evaluating the impact of the technologies. Often technologies have not been adequately tested under producer circumstances so as to assess their suitability and performance. Further, the technology delivery mechanisms have often been ineffective and at times non-existent or not linked with the technology generation process. The linkages to a complementary input supply system for the packages that are essential to exploit the benefits arising from any given technology have also been at best weak. A technology policy that addresses these weaknesses would include a focus on scientific and socioeconomic issues - including adaptation and adoption of improved high yielding, disease and pest resistant plant materials. It would also place emphasis on farm power and tillage, post harvest handling and agro-processing technologies to increase productivity, reduce losses, add value and improve quality.

Agriculture and Economic

In recent years there has been enormous interest in the economic rise of East Asia. However, little attention has been paid to the role of the agricultural sector, either in the 'miracle' industrialization of the region or in the political economy of the mature industrial economies that have now emerged. Meanwhile, moreover, the growing protection of East Asian agriculture has become the focus of bitter trade disputes and the region's farmers now face the uncertain prospects of liberalization and internationalization. This new study describes and analyses agriculture's contribution to the 'East Asian model' of development and the reasons behind the dramatic rise in agricultural protection (Stavis, 1982).

The economic organization of agriculture

Within the context of their less than abundant natural environment, East Asian farm households have thus devised farming systems, created an agricultural infrastructure and learned to live within social and political organizations designed to ensure subsistence and survival. In this section, we will consider their agricultural organization from an economic point of view, looking at the distribution of the land and labor

resources which generate agricultural output and incomes, at the technology which underlies the use of those resources, and at the institutional organization of economic life in rural areas. All have combined to place the control of cultivation in the hands of the small-scale, family-based, farm household on whom, as subsequent sections will show, agriculture's role in the development process depended (Fardmanesh, 1991).

Management and agriculture

The post-World War II era has witnessed a drastic increase in irrigation activities that have contributed substantially to the massive growth in agricultural production that enables humanity to feed its doubling population. However, a distinction has to be made between the overall positive contribution of irrigation to agricultural productivity and economic welfare and the significant amount of misallocation and mismanagement of resources that have accompanied the expansion of irrigation. In many cases, water resources have been overdeveloped; there has been overspending on capital; and significant costs in terms of loss of ecosystems, extinction of fish species, and contamination of water sources. This chapter provides an economic perspective on the contribution of irrigation and water resources to past agricultural development and future water resource management. The efficiency of water use is affected by decisions made at many levels. The inefficiencies that can occur at different levels of water management are discussed (ACIL, 2003).

Agriculture and Economic Growth in Iran

Economic growth rises due to increase in agricultural value added, gross capital formation, labor force and real exports and decrease due to increase in inflation rate in case of Iran. Agricultural value added stimulates the economy in long-run through increase in aggregate demand. In this study it is examined that there is relationship between economic growth and in agricultural value added along with gross capital formation, labor force and real exports using the autoregressive distributed lag (ARDL) model. Results indicate that the empirical evidence strongly suggests that agriculture makes a significant contribution to economic growth in the long-run. Furthermore, the result also shows evidences that real export (trade openness) (Samimi and Khyareh, 2012).

CONCLUSION

This paper has reviewed the economic and management literature related to the role of agriculture in development. Since the key question is how to use agriculture in support of a structural transformation of the economy, we began by examining the role played by agriculture in the development process and its

interactions with other sectors. In poor countries, agricultural growth has a huge capacity to reduce poverty. Due to this potential, improving productivity in the agricultural sector in developing countries is critical and an essential step to reach the Millennium Development Goals. Some 75 percent of today's poor living in rural areas would benefit massively from higher incomes in agriculture. Moreover, agriculture also has the potential to generate economic growth in developing economies that depend to a large extent on this sector, for example in many Sub-Saharan African countries.

The most pressing issue at present is to make progress on food security and put in place effective coping mechanisms for poor people. Economists and policymakers have been unable to find adequate policy instruments to limit food price volatility. Macroeconomic approaches to stabilize prices national markets are not promising. Social safety nets, which help the poor to cope with income shocks, have the potential to mitigate adverse effects and prevent households from falling into chronic poverty, but they require good targeting mechanisms and a stable institutional environment. Beggar-thy-neighbor trade policies to stabilize prices and guarantee national food security have been counterproductive: they have harmed poor populations and reversed some past gains. The best instrument to protect small farmers from income shocks is to increase agricultural productivity. But that is the most scientifically and institutionally difficult challenge.

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