

Revelations to Revitalize Agriculture Sector

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“Yield of all major and minor crops in Pakistan is below the world’s average, making our products uncompetitive.”

Agriculture is the lifeblood of Pakistan’s economy because it contributes about 18.5% to GDP, provides livelihood to 64% rural inhabitants and employs 38.5% of the total national labor force. In contrast to high contribution of agriculture sector to Pakistan’s GDP, a very meager amount of financial resources is spent on research and development (Figure 1). Investment in other sectors may generate higher growth than agriculture sector but 70% of total population is residing in rural areas, implying that such investment will not help to alleviate rural poverty. It is the only sector that provides raw materials to the industries and helps in poverty alleviation. In addition, it is also one of the major contributors to the foreign exchange earnings.

It is observed that output growth in agricultural sector is mainly driven by input growth and contribution of technology is negligible. Yield of all major and minor crops in Pakistan is below the world’s average, making our products uncompetitive in the international markets. Injudicious use of chemical pesticide and fertilizer has adversely affected the natural resources like soil, water, air and quality and safety of food. On one hand, majority of farmers in Pakistan are smallholder, resource-poor and illiterate, limiting their capacity to quickly adopt modern production



techniques but on the other hand, extension service system is completely outdated especially after fourth industrial revolution. All these issues are jointly making Pakistan uncompetitive in the international markets and also affecting the welfare of local consumers adversely. High cost of production and low quality provides more space for imported products to occupy our local markets.

Water being a critical input for agriculture sector is getting scarce but still Pakistan’s water use efficiency in the crop production system is extremely low. Thus, increasing pressure on natural resources is contributing to increase cost of production. Moreover, per capita availability of land for producing food and other agricultural products are declining overtime but food requirements is continuously increasing lead by increasing population pressure and per capita income growth. This is posing serious threat to future food security and poverty alleviation strategies. It is warranted, if government do not address the aforementioned problems and challenges faced by agriculture sector then it will not only adversely affect the food security of future



“My research showed that one needed to find a balance between markets, government, and other institutions, including not-for-profits and cooperatives, and that the successful countries were those that had found that balance.” - *(Joseph Stiglitz, Nobel laureate in economics, 2009)*

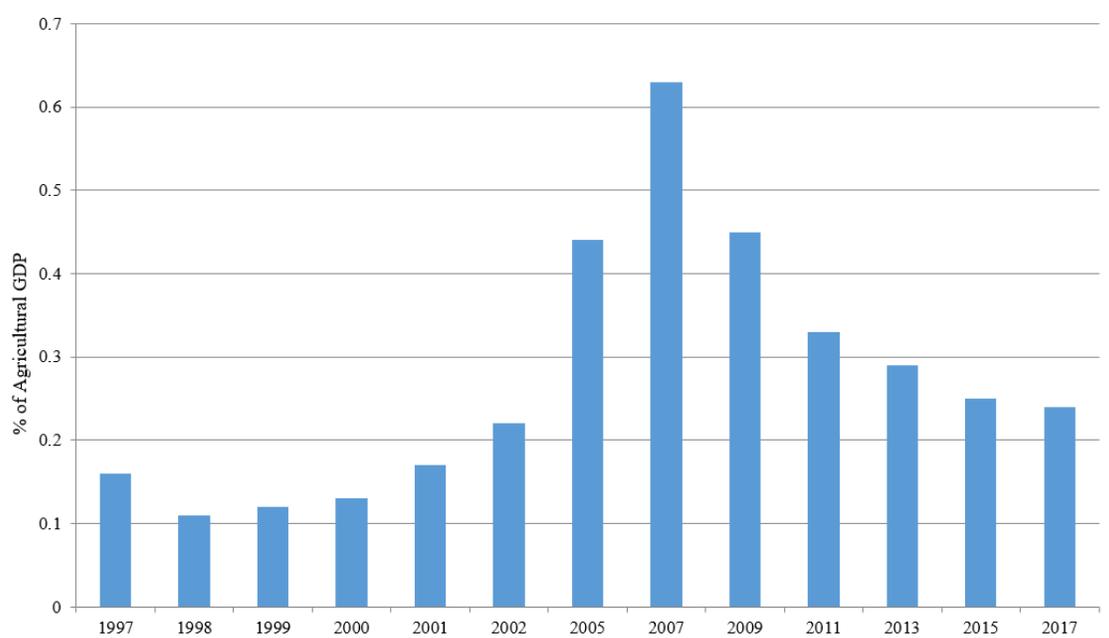


Figure 1: R&D investment as percentage of agricultural GDP over the years

Source: UN (2017). https://www.theglobaleconomy.com/Pakistan/Research_and_development/

generations but it may also upset the prospects and development in manufacturing sector and add to the woes of trade deficit and balance of payments.

In contrast to high contribution in GDP, a very meager amount of financial resources like 0.18% of agricultural GDP is being spent on this sector. This has made Pakistan net food importing country since 2013- putting additional burden of US\$2 billion per annum. Yield gap between average and progressive farmers is about 40%, which is even higher between research stations and farming communities (40 to 80%). Similarly, livestock has 7% lower yield in milk production than world average and 2% in major crops. Although we are food self-sufficient in sugar, wheat and rice but bias policies (input subsidy, support price etc.) encouraged farmers to grow these crops, resulted in halting the shifts from low value to high value crops.

The existing processing and marketing structure is afflicted by cartels - leaving no or fewer opportunity for poor and unorganized farmers. Low returns are restricting them to invest in modern technologies, compelling poor farmers to operate at the low level of global production frontier. Resource poor farmers are facing serious credit constraints to adopt innovations on one hand and on the other hand very little public investment has been made on R&D to make these innovations available at low price. It increases the dependency on imported innovations which are not only expensive but also risky. This limits the adoption of innovation to progressive farmers and production at small farms is costly- making Pakistan uncompetitive in international markets.

Macro and micro level policy measures could help to revitalize the agriculture sector. The low private investment in agriculture sector is mainly because of wider gap between social and economic returns on innovation in agriculture sector. Because production in agriculture takes place in open space and imitation becomes easier. This is discouraging private investment unless like in industry where production takes place in close environment and imitation is not possible. Contract farming and development of agro-industrial clusters (AIC) could be a viable option but contract farming is not sustainable if different stake holders in the value chain do not have the capacity to observe innovations. However, it derives research from academic to problem solving research and public funding to private funding research. Moreover,

it helps to transfer government emphasis from broad-based subsidies to need-based support and general infrastructure to human resource development. The development of agro-industrial cluster could generate over US\$22 billion additional income in the agriculture sector but private investments are not coming to harness these potentials. Therefore, unless development of innovations at different nodes of value chains and necessary infrastructure is created through public investment, current situation is unlikely to change. Hence, investment in agriculture sector needs to divert from subsidy to innovate technologies (varieties, breeds and machineries) and to enhance farmer's capacity to absorb these technologies efficiently. This will not only help to improve productivity but also reduce cost of production – improve competitiveness in international markets. In the light of above discussions, the following policy interventions are proposed.

1. Increasing public investment in research and development activities to innovate technologies and strengthening public-private partnership to disseminate these technologies.
2. Divert public investment from direct and indirect subsidies to need based research, capacity building of stakeholders, innovations, establishing vocational institutes and science parks and incubators.
3. Promote contract/cooperative and corporate farming to overcome the existing inefficient production and marketing system.
4. Institutional and policy reforms that can lead to slow down the process of transforming agriculture land into housing societies and industries.

New Initiative by Pakistan's Government: Prime Minister Agriculture Emergency Programme



Vision "Food Secure Pakistan"



Worth Rs 277 billion



Boost to Agriculture and Livestock



Improvements in water availability



Soil conservation



Shrimp farming



Establishing new agriculture markets



Protecting farmers from exploitation

Contribution by Dr. Uzma Zia

Source: Pakistan Economic Survey (2019-20)

A low-angle photograph of golden wheat stalks against a clear blue sky. The wheat stalks are in the foreground, some in sharp focus and others blurred, creating a sense of depth. The sky is a uniform, vibrant blue, occupying the upper two-thirds of the frame. The overall composition is simple and evocative, symbolizing agriculture and growth.

“If agriculture goes wrong, nothing else will have a chance to go right.”

- (Mankombu Sambasivan Swaminathan)