



Asia-Africa AgriBusiness Forum

Access to Market, Finance & PPP in AgriBusiness & Food Processing

Introduction

Agriculture development is critical for securing nutrition, improving employment opportunities and income in the rural sector. Indirectly, agriculture development also contributes to environmental management, as the sector add to the critical needs such as absorbing carbon, managing watersheds, and preserving biodiversity. Agriculture development is also very important for the world, particularly the developing economies, in view of the spikes in the world food prices in the recent past.

According to a publication¹ by FAO, the world may be in need of an agricultural system that can produce 50 percent more food to feed the world's estimated 9 billion people by 2050. However, this would be a challenge if we do not have a coordinated approach to develop the agriculture sector in the world. The growing demand for food and nutrition can be managed with a good policy framework and sustained investments.

While on the one hand in some countries there has been overuse of cultivable land to meet the food requirements, on the other hand, some countries are left with vast track of cultivable land, leading to underutilization of resources. With better investment and a coordinated approach, the agriculture sector in the world can be optimally utilized to achieve the desired level of food production and productivity. And, along with agriculture development, by providing better linkages between agriculture and other sectors of the economy, the world can also achieve nutrition management and public health to its population, economic growth and improvements in livelihoods and the environment.

Africa: Opportunities and Challenges in Agriculture sector

Agriculture remains an essential component of Africa's economic development. At present, Africa depends on food imports significantly to feed its population. Share of agriculture in Africa's GDP has declined over the decades; from a level of 21% share in GDP during 1960s, the share has come down to around 14% now. However, if we exclude South Africa and mineral producing countries, the rest of the continent holds a share of over 25% in GDP. On the contrary, agriculture sector is the source of livelihood for nearly three-fourth of African

¹ World Agriculture Towards 2030/2050, The 2012 Revision



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population. Thus, boosting agricultural productivity in Africa will not only help in attaining the desired level of economic growth, but also in ensuring food security and eradicating poverty in the region. Such an approach would turn Africa into both a food producer for catering to its own food requirements, and also position the continent as a food exporter.

African countries have started placing high emphasis on agriculture development, particularly after the spike in food prices since 2007/2008. Now, several nations in Africa have set annual growth targets of about 8 – 10 percent for the agriculture sector. African Union, under the Comprehensive Africa Agriculture Development Programme (CAADP) has set a growth target of 6%, which is considered to be very ambitious, higher than the 4% aggregate growth rates witnessed for the region as a whole. To achieve such high growth, the cultivated area, irrigable area, farm investment and crop productivity, all need to rise significantly.

Africa offers tremendous opportunities to the world in resolving the challenges associated with the food security. The continent is having relatively low base of agricultural production as compared to the rest of the world. Sub-Saharan Africa has large tracts of arable land with extensive water resources. The continent is geographically closer to markets such as Gulf and Europe.

Inadequate farm infrastructure, unsuitable socio-economic conditions of the farmers, inadequate access to farm inputs, knowledge gaps, including financial illiteracy are some of the challenges faced by the agriculture sector in Africa.

African agriculture is also facing external challenges: rainfall is often unreliable. Soil conservation measures are not fully scientific; thus, securing water supply for agriculture development is a major challenge in Africa. The share of irrigated land in total cultivated area was 6% in Africa as compared to 41% in Asia. Last, but not the least, agricultural development is hindered by the negative effect of agricultural subsidies extended in developed economies, which undermines remunerative prices to African farmers.

According to a Strategy Paper by the African Development Bank², While one half of the rural population of south Asia lives within a distance of one-hour journey to a market, nearly 50% of African farmers still live 5 hours or more from a market. Besides the poor infrastructure, the cost of transport is also very high in Africa. According to an estimate by African Development Bank Group, cost of transportation amounts to nearly three-fourths of the value of goods exported.

² Agriculture Sector Strategy 2010-2014



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Agricultural Transformation in Asia

Agriculture sector has played a vital role in the economic development of several Asian economies. However, in most of the Asian economies the share of agriculture in national GDP has come down faster than the fall in agricultural employment. Hence, agriculture sector is still the largest employer in developing Asia, but not a largest contributor to national GDP.

Asian agricultural economies have experienced significant growth in production as well as productivity since the institution of Green Revolution. Asian nations, under the Green Revolution, undertook coordinated efforts to infuse vital inputs into the agricultural system. Irrigation, through installation of major and minor canal systems, was also one of the most crucial inputs to the Green Revolution. As a result of the measures undertaken under Green Revolution, agricultural productivity and production have grown manifolds in Asian nations.

The output per worker in the agriculture sector has risen faster in Asian region (2.2% per annum during 1980-2010) as compared to the per capita output in Sub-Saharan Africa (0.6% per annum during 1980-2010). Technological advancements in agriculture production have contributed to the yield/productivity. This has been despite slow growth in expansion of land area for cultivation. Countries such as China, Republic of Korea, Indonesia, Viet Nam, India Bangladesh, Lao PDR and Pakistan have achieved improved yield levels since 1970s. The composition of agriculture produce produced in the Asian region has also undergone transformation: from traditional crops (cereals) to high-value crops.

Asia and Africa – Opportunities for Collaboration in the Agri-business

Before identifying the areas for collaboration between Asia and Africa in agri-business, we need to look at some of the salient success features of agricultural transformation in Asia. A Working Paper³ by ADB has, based on analysis, inferred that agricultural labour productivity in Asia has grown faster than in other developing regions. Similarly, land productivity in Asia has also grown faster than other developing regions. According to the Study, technological development in agriculture, since the 1960s, has led to significant improvements in yields of traditional crops. Besides, composition of agricultural output of developing Asia has also shifted from traditional to high-value products.

Under this background, opportunities for collaboration between Asia and Africa could be summarized as below:

- There has been significant gap in labour productivity (in other terms income) in farming and non-farming sectors in Africa. Low agricultural productivity is also one of the

³ Agriculture and Structural Transformation in Developing Asia: Review and Outlook, ADB, August 2013.

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reasons for such a situation. If such a situation continues, this would draw out labourers from farm sector to non-farm sector. There are estimates that about 40% of population in Africa lives in cities, and the share is likely to grow if the gap between labour productivity is not narrowed down.

- While the success story of Asia in achieving high yield in wheat and rice may not be successfully replicable under the existing conditions in Africa, developing Asian nations could collaborate with African nations in undertaking research in suitability of crop diversity and production systems in Africa. Asian nations can also collaborate in exchange of agricultural R&D and encourage collaboration of corporate sector of Asian nations with African national governments.
- Asian nations could also share their experiences in technological solutions to improve crop productivity with African nations; sharing of supply chain solutions to reduce transportation and marketing costs would also help reduce food costs in African nations.
- Private corporate sector in Asian nations may be encouraged to invest in creation of agricultural value chains, so that the farmers in Africa improve the quality and food-safety norms, get better price realizations, and thereby improve their farm-incomes.
- Investments in processing sector would also help contribute to the growth in demand for agricultural produce, and improve quality of the products.
- Besides sharing outcomes of agricultural research and suitable technologies, Asian nations also need to contribute to skill development among African farmers.

Access to Markets – Importance of Value Chains

According to OECD-FAO Agriculture Outlook 2013, for the next ten years (2013-2022), expansion of agricultural production is likely to slow with slower area and productivity growth. The OECD-FAO Agriculture Outlook suggests that the supply should keep pace with the growing demand, and in this context, steps are needed to reduce food loss and waste through supply chain solutions.

Development of agricultural value chains are important to link up the market with the producers, so that farmers are encouraged to increase their crop productivity, crop production, so that farm income is increased in rural areas. Market access to farmers, especially small farmers means that they can reliably concentrate on production rather than worry about the markets.

Value chain development favours not only production improvement, but also improve distribution network to meet the volume requirements and address quality and safety standards. In developing economies of Asia, the value chain development has also contributed to the penetration of organized retail, including supermarkets. According to an ADB estimate,



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China, India and Vietnam are the frontrunners in developing Asia with growth in supermarket penetration ranging between 25-50% in the last one decade.

Creating Access to Agri-Finance

Access to financial services for all types of producers of agro-products, as also processors of agro-products is very critical for development of agriculture sector in Africa, as also to reap the significant opportunities it offers.

Agriculture in Africa, and particularly in the Sub-Saharan Africa, is being overlooked by financial institutions. There are research findings which have estimated that the credit extended by financial institutions and classified as 'agricultural credit' in many African nations is used for the purposes other than for farm production, such as warehousing infrastructure, or for processing industry. Since agricultural activity is subject to high systemic risks, it has been challenging to the financial institutions to adequately engage with this sector. This feature has been significant for the financial institutions in Africa due to certain inherent challenges faced by the African agriculture sector. A research paper⁴ has highlighted the following as challenges being faced by African agriculture sector:

- Distance, isolated and dispersed population, and poor road and energy infrastructure make it difficult and expensive for financial institutions to serve in rural areas.
- In most African countries, farmers operate low-technology businesses on small and fragmented plots of land with limited access to irrigation, quality seeds, and productivity enhancing technologies.
- Due to low level of farmer education and financial literacy (no record keeping, business plans or bank accounts) financial institutions find it difficult to put together a credit profile for the loan and monitor.
- Limited financial services products that take into account the specificity of agriculture.
- Farmers find it difficult to provide desired collaterals to financial institutions
- Financial institutions also treat the exogenous risks (such as production and price risks) high, and shy-away from exposure without proper insurance products (weather insurance etc).
- Limited level of collaborations among farmers – weak cooperative structure not only for production, but also in other activities, such as obtaining farm inputs, selling the products, negotiating credit, and setting up of common infrastructure.

Consequently, players in the agriculture sector in Africa, especially the small-holder farmers, lack access to adequate financial services, which impact their growth prospects.

⁴ Creating Access to Agricultural Finance by Agence Francaise De Development

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A Research Paper⁵ prepared by African Union and GTZ has identified the following as challenges to agricultural finance in Africa.

- Financial institutions are reluctant to lend to the agricultural sector in Africa, as they perceive high risk;
- Development of agricultural finance market is hindered by cost structures on both the demand and supply sides that make it difficult to offer agricultural credit at prices within the means of producers, while providing adequate returns for lenders;
- Farmers, notably small holders, lack collateral;
- Financial infrastructure (such as credit bureaus, payment systems, collateral registries) serving this market segment is particularly weak;
- Legal and regulatory frameworks do not take adequately into considerations, the specificity of agricultural finance, resulting in overregulation and inflexibility.
- The range of appropriate financial instruments is limited.
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Research papers from IFPRI have cited that small farmers in Africa, as in other parts of the world including Asia, work in risky environments which make lending very expensive for the financial institutions. Government intervention in credit delivery and populist measures in some countries towards waiving agricultural credit has created a sense of apprehension among the financial institutions towards this sector.

Developing Asia has the experience of creating alternative channels of credit delivery to this sector, viz., farmers' cooperatives, self-help groups, savings and credit associations etc. While such models are also sparsely prevalent in Africa (e.g. Village Saving and Loan Associations in Niger, Rural Community Banks in Ghana), Asian nations could share their success stories and help enhance penetration of institutional credit in African agriculture.

Evolution of Financing along the Value Chain

The concept of agricultural value chain covers full range of activities and participants involved; besides production, moving agricultural produce from farm yards to the processing stage, and upto end-consumers is also very important in the value chain development. Thus, one could define value chain finance as flow of financing within sub-sectors, for the specific purpose of getting products to markets. Such a relationship connects all value chain stakeholders through vertical and horizontal linkages.

For several centuries, traders have provided finance to farmers for farm-inputs, harvest or other such needs including family emergencies. While this could be considered as a small section of value chain finance, it needs to be extended further from conception stage through

⁵ Policy Brief on Agricultural Finance in Africa

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the different phases of production. In general, majority of agricultural finance in developing countries is provided by actors from within the value chain, involvement of financial institutions is limited. Thus, it is very important to bridge the gap between the financial institutions and value chain actors, so that financial inclusion takes place significantly.

PPP Models for Agriculture

Private-Public Partnership (PPP) models have become a recognized institutional cooperation for undertaking / delivering large, complex and high-cost projects, particularly in infrastructure sectors. The PPP is viewed as the governance strategy to minimize transaction costs and coordinating and enforcing relations between partners engaged in production of goods and services. The model help promote social and economic development through efficiency in implementation. The model could also be extended to agriculture sector, where investments are not forthcoming under normal circumstances. PPP model in the agriculture sector help enhance capital formation, and thereby improve robustness in the farming system, and efficient management practices.

From a government's perspective, the following are the broad reasons for engaging under the PPP model:

- Generate funds from private sector freeing public funds for core economic and social programmes;
- Pooling resources, technology, skills and expertise contribute towards increasing the efficiency of project implementation.

The perspective of private sector participant is different with the following objectives:

- PPP lowers risk as compared to independent venture in such projects;
- Provide access to new customers for secondary business lines
- Competitive advantage and brand presence in value chain linkages;
- Lowers the rates of cost of capital.

While the public sector has only limited resources for investments in agriculture, the private sector tends to invest in ventures that are commercial in nature. The PPP model offers the prospect of overcoming the shortcomings of each of these sectors and makes the investment as successful ventures. The model brings together efficiency, flexibility and competence of private sector, with the accountability, long-term perspective, and social interest of the public sector. Put in a different fashion, PPP model enables sustainable outcomes that no single partner could achieve alone. Further, the outcome of PPP will also be more than that are achieved by individual partners in isolation.

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Box

Flagship Scheme of Government of India to Promote PPP in Agriculture

Government of India has issued new guidelines permitting State Governments to tie-up with the private sector firms for big agri-projects under its flagship programme Rashtriya Krishi Vikas Yojana (RKVY), in order to boost farm sector growth. Main features of the Programme are:

- Corporates to propose integrated agricultural development projects, taking responsibility for delivering all the interventions through a single window. Each project to target at least 5000 farmers, spread over the project life.
- Complete flexibility in design, but ensuring an integrated value chain approach, covering all aspects from production to marketing. Projects can span 3-5 years.
- Average investment per farmer during project must be quantified; desirable benchmark is ₹ 0.1 million.
- Government support will be restricted to 50% of the overall per farmer investment proposed, with a ceiling of ₹ 50,000 per farmer through the project cycle. The remaining investment will be arranged by the corporate through institutional financing and its own and farmer contributions.
- Key interventions which must feature in each project are: a) mobilizing farmers into producer groups and registering them in an appropriate legal form or creating informal groups as may be appropriate to the area and Project (joint stock or producer companies, cooperatives, self-help group federations etc.); b) technology infusion; c) value addition; d) marketing solutions; e) project management.
- Small Farmers' Agri-business Consortium (SFAC) has been designated as a National Level Agency, to act as a facilitator and link the project promoter to the concerned State Government.
- An independent monitoring agency will be appointed by the State Government to closely track the performance of the project and report to all relevant stakeholders in the State and Central government.

Source: Ministry of Agriculture, Government of India.

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There is also a need to change the perception of the various stakeholders, viz., traders, entrepreneurs, farmers, market functionaries, bankers etc., towards PPP model of agriculture development.

Sustainable PPP Models

PPP in agricultural production

There is scope to leverage PPP models as a relevant vehicle in the agricultural production. Some of the areas in which a collaborative approach can be taken by private sector players in strengthening the hands of public sector and enhancing agricultural production include:

- Providing hybrid seeds customised to respective geographies;
- Assisting in the distribution process to beneficiaries identified by the Government;
- Assisting in soil and fertility management;
- Providing advice to farmers from sowing to harvest; guidance on post-harvest care;
- Facilitate knowledge sharing sessions on Government schemes;
- Enhance user-industry linkages; and
- Procurement facilitation.

PPP for Agricultural R&D Development

G-20 Summit held in Toronto, Canada, stressed the importance of R&D to narrow the productivity gaps. G-20 members also declared that “private sector will be critical in the development and deployment of innovative solutions that provide concrete results on the ground”. According to a research paper⁶ by Syngenta Foundation, growth in public investment in productivity-enhancing agricultural R&D has been declining for sometime in most of the world, except China. On the other hand, private investments in agricultural R&D have grown over the years. However, one should not construe that private sector are capable of meeting the entire R&D requirements of agricultural sector to address the challenge of achieving food security, without the support of public funds or organisations.

Since R&D is a science-based activity, it could be best performed with partnership among scientists and institutions, which are multi-disciplinary, both in public and private sectors. Land area in the world is limited; potentially irrigable area is also facing slow growth. In that sense crop production, as also the crop productivity, could be increased with agricultural R&D. Besides, investing in R&D would also help in sustainably conserving resources such as soil and water. PPP models would help enhance cooperation among institutions in private and public

⁶ Public-Private Partnership and Sustainable Agricultural Development



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sector to develop R&D infrastructure and appropriate technologies. Such cooperation would not only enhance productivity and crop production, but also generate employment, augment farm income, alleviate poverty and conserve precious soil and water resources.

However, there are certain prerequisites. Firstly, a national level policy statement encouraging PPP in agricultural research is required, which should be followed by guidelines for PPP. Besides, there should be transparency in guidelines as also implementation, and developing a sense of trust between public and private sector. The laws need to be favourable to such cooperation, and outcome of R&D, especially with regard to sharing of IPR and royalties. The Government institutions may encourage sabbatical positions of scientists from Government institutions to work in the corporate sector.

PPP for Agriculture Marketing

Market infrastructure such as creation of well-developed market yards, including warehouses for storage, transportation network, including cold chain infrastructure, facilities for grading, standardization to ensure food safety and quality management are requisites for successful agricultural marketing. Such infrastructure facilitates vertical and horizontal integration, thereby bringing economies of scale and cost efficiencies in the supply chain. These infrastructure facilities also improve quality of marketable produce, reduce the marketing costs, which is crucial for profit realization for growers, and reduction of costs to the consumers. Paucity of infrastructure and absence of scale in the agriculture sector are prime reasons for engaging a PPP model even for marketing of agricultural produce.

Agricultural Marketing projects due to requirement of relatively larger capital with lesser or uneven returns are less attractive for private entrepreneurs for large ticket projects. The long gestation period of the project further creates the problem of economic viability, indicating the non-viability of the project, which is proving deterrent for the private entrepreneurs. Thus, there is a need for public participation for such projects by offering cheaper land and Viability Gap Funding on a suitable model of BOO/BOT. In addition, the policy environment, including legal framework, should be conducive to the participation of private players in developing marketing oriented infrastructure. Commitments are also required from both the sides towards balanced sharing of risks and rewards, accountability, roles and responsibilities, to make the model successful.

Select Variants of PPP in Agri-Marketing Infrastructure:

Market oriented agriculture development requires creation of infrastructure which can be done through efficient PPP models. Some of the variants and their pre-requisites are briefly discussed below:

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- Farm to Market Roads : Low income levels and low vehicle volumes means that in many rural areas neither road construction, rehabilitation, nor routine maintenance can be financed from user fees or tolls alone. Here, role of public sector with an element of subsidy will be crucial, unless the user-processing sector is willing to put of the requisite infrastructure.
- Water and Irrigation : Private sector could serve as an interface between public sector (provider of irrigation facilities) and the farmers (users), and thereby play a major role in education the farmers in water conservation, irrigation management etc, or even maintenance of irrigation assets of public sector.
- Wholesale Markets and Trading Centres : Since user demand may not be to its fullest potential with an appropriate regulatory environment, participation of the private sector and cooperatives in developing wholesale markets / trading centres need to be encouraged. Regulatory authorities may consider facilitating alternative income streams for the concession holders.
- Agro-processing : Agro-processing should be encouraged nearer to the farm yards; this would be possible if public sector considers allocation of land through concessions, or provide capital grants for investments.
- Marketing Information : Public sector's mandate for provision of information and services can be best achieved through harnessing the potential of the private sector. However, there may be obstacles that must be overcome, including clarifying roles and responsibilities, and generating sufficient awareness of services among farmers.

Conclusion

Developing countries have made substantial progress at improving food security, reducing poverty and improving human health. This has largely been achieved through growth in agriculture leading to increased food and feed production and improved farm incomes. However, lately there has been stagnation in agricultural growth giving rise to concerns about food and livelihood security of large sections of population who make their living out of agriculture and related enterprises.

Experiences in Asian region, over the last two decades, indicate that PPP models have the potential to enhance productivity, profitability and environmental sustainability of farming systems. Asian countries need to share their experiences with regard to various successful PPP models in agriculture sector with African nations. Besides, sharing of experiences in financing of agriculture sector, and successful marketing of agricultural produce are also important for development of sustainable agriculture development in Africa.

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Possible PPP Models and Partnership Value

PPP Model		CPS	FO Farmer	Description	Partnership value	
TRANSACTION BASED	A	CONTRACT FARMING	Purchaser Sponsor Operator	Producer Farmer Land owner	Contracting to deliver certain crops at quality and quantity, often at pre-determined price. Traditional with plantations using smallholder labour. Contract can target only at harvest/post-harvest, with farmer control of input or the CPS sponsor can steer the value chain. Corporate farming is contract farming where production of the land asset shifts party to the CPS.	Long duration, fixed prices, economic guarantees, rural, investment, incentives
	B	FARM CONTRACTS	Seller Inputs & supplies:	Buyer	Seed, fertiliser and chemicals. Tools, lower cost machinery and equipment Other physical supplies and inputs for operation, maintenance in value chain. Goods over services.	Site specific, Fixed prices, group costs Tech and knowledge transfer
	C		Buyer Purchaser Outputs/dist.	Seller Producer	Goods over services. Sales transaction of yield, crop harvest, output, post-harvest product, bi-products, secondary products, non-farm support activities, marketing, distribution, transport.	Pre-set pricing, Integrated resource mgmt. group transactions.
	D		Service provisions	Customer	Service as insurance, electricity, telecom. Important to infrastructure and functioning (also Public Sector). User fees.	link to larger corporations
	E		Professional services	Client Customer	Specific based services in consulting, auditing, engineering, technical, IT, scientific, business development, training, information, etc. Providing soil sampling is an example.	Local business. Human resource, cross-sectoral multi-disciplinary, capacity building
OWNERSHIP BASED	F	PRIVATE OWNERSHIP	Owner (O&M)	User fees	Payment for use of high value or specific purpose machinery – transplanter, combine harvesters, processing equipment. Asset not having to be on site-full-time. Skilled operation and maintenance. Other resource that can be feasible can have a unit cost to user.	Cost vs. labour efficiency, Transfer of skills capacity of O&M, link to farming technology
	G		Owner	Lease (O&M)	High value general use machinery as a tractor .Assets on site, frequent use or broad application with operation and maintenance. Long term physical asset in infrastructure, buildings.	Build local capacity, long term incentives
	H	EQUITY	Owner	Owner	Holding stock, being a shareholder in a FPC or other Pvt. Ltd or Ltd. company. Co-ownership of property, land, housing, infrastructure, storage facilities, water storage and irrigation.	Joint business venture, attract capital. Co-management,
	I	FINANCE	Investor	Business Investment fund object	Targets specific value adding measures to resource and production efficiency or investment on general terms to an Investors' choice where to place capital, no guarantee on return. Funds Re-finance. Funds, Banks, sponsorship & subsidising from CSR, CSOs (NGOs)	Manage via financial instrument, active investor role in management
	J		Creditor Banks Credit Unions	Borrower – spender	Loan principle with interest. Long – term secured major loans with claim to collateral. Short –term unsecured minor loans. Debts invest, Micro – credit, Loan coupled to specific business or open. Banks, credit unions.	Fixed interest, group policies, business review, link in societies (SHG)
	-	FARMER OWN	Lease (O&M)	Owner	Reverse situation - FO holds asset and leases it out.	FO enterprise
-	User fees		Owner(O&M)	Reverse situation – FO holds asset and collects user fees.		

Source: PPPs in Agriculture: Strategy and Models for Implementation; Bioforsk.