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Public Private Partnerships as an Innovative Approach for Agricultural Sustainability in Sri Lankan

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ABSTRACT

Many countries identified the importance of Public Private Partnerships (PPP) in agriculture in terms of a shared mechanism among partners for input, resources, markets, technology, profitability, and associated risk. In addition, many studies revealed that the partnership approach empowered rural farmers, youth, and women regarding accessibility to the newly invented agriculture production and marketing technology. Nevertheless, in Sri Lanka, PPP primarily focused on construction and manufacturing. This Paper attempts to identify whether the right partners are the crucial factor in planning a PPP model for better agriculture prospects in Sri Lanka. Establishing the right PPP in research and development and agricultural marketing will enhance the growth of the agriculture sector in Sri Lanka, thereby sustainability in agriculture and the livelihood of millions of poor farm families, youngsters, and consumers.

Keywords: *Agribusinesses, Public Private Partnership, Sustainable Agriculture*

1. INTRODUCTION

Agriculture involves plants, land, water, climate, and other natural resources that often produce problems in food security and environmental and social issues. On the other hand, agricultural products' production, processing, and marketing are dynamic with the continuous changes in consumer behavior, especially with the increasing world population, complexity of life, and innovations in the food industry (Ponnusamy,2013). Therefore, any government has to look into innovative approaches to cater to the changing demand and behavior of the consumer.

Currently, the agriculture sector, including forestry and fishing, contributes about 7.9% of the GDP in Sri Lanka, while the industry and service sector contributes 27% and 56.8% of the GDP, respectively (Central Bank,2018). The increasing population (19 mn in 2000 and 21mn in 2018: Central Bank,2018) requires an increase in food availability to ensure food security. On the other hand, the increasing global population also requires a proportionate increase in food availability to ensure food security for all (Kaur,2019). In order to ensure food security, it is essential to effectively utilize food production, increase productivity and reduce food wastage. Kaur (2019) indicated in his Paper that "The distribution of food across the supply chain also needs to be effectively managed to prevent food wastage and food loss during the process of harvest, procurement, storage, and distribution." It indicates the necessity of effective agricultural production and proper distribution to cater to the increasing food demand. In this scenario, it is arguable that the public sector in Sri Lanka can no longer play a central role in developing and disseminating improved technologies in agriculture and marketing to farmers and consumers.

Over the last decade, Public Private Partnerships have created a rapid interest in the development, financing, & operation of infrastructure (RICS, 2012), conquering more than 40 countries all over the world (Dunnigan & Rajput, 2010) and PPPs are a popular type of collaboration in many sectors of the economy around the world (Ferroni and Castle,2011). Most governments go into Public Private Partnership intending to deliver significantly improved public services by contributing to increases in the quality and quantity of investment; to release the full potential of public sector assets, including state-owned businesses, and hence provide value for the taxpayer and wider benefits for the economy; and to allow stakeholders to receive a fair share of the benefits of the Public Private Partnership (Dabak,2014). The PPP approach is adopted in various facets of agriculture, such as research and development, quality enhancement, crop production, extension, and marketing (Ponnusamy,2013). Public private partnership approach created many success stories in various sectors of the economy, including agriculture, health, science and technology, education, and infrastructure development in India (Ponnusamy, Bonny, and Das, 2016). Therefore, attempting to utilize the potential of PPP strategies may enhance agricultural productivity, production, and marketing in Sri Lanka.

1.1. Purpose of the Study

The public-private-public-private partnership is a dynamic and developmental process of financing infrastructure projects. It represents a form of cooperation between government bodies and the private sector to modernize infrastructure construction and strategic public services (Benkovic et al.,2015). The study done by Spielman and others (2015) examines the extent to which PPPs are being used to overcome market and institutional failures that otherwise inhibit the development and dissemination of technologies targeted specifically to small-scale, resource-poor farmers in developing countries by a survey of 75 PPP projects in the international system; findings suggested that while PPPs are changing the way the system manages its research agenda, few partnerships lead to joint innovation processes with the private sector indicates the need for closer examination of organizational practices, cultures, and incentives in the international agricultural research system. With the above background, this study aims to discuss how Public Private Partnership can be an innovative approach to promoting modern agriculture in Sri Lanka to bridge the gap between traditional and modern agriculture towards sustainable agriculture and development. The assumptions on the benefits of PPP are based on literature and case studies reviewed to find out whether PPP can generate higher benefits that have the potential to provide positive benefits and higher impact as an innovative approach in the Sri Lankan context.

1.2. Methodology

The author reviewed journal articles, industry-related publications, and government publications to build this article to support the explanations and to find out the potential of PPP as an innovative approach in agriculture. The Paper followed a deductive approach where arguments and explanations were mainly supported by empirical evidence and associated theories. Therefore, a literature review was the primary research tool. The Paper tried to discuss the empirical evidence found globally and how those concepts and practices are applicable in the Sri Lankan context. Finally, the author concludes the Paper by proposing future research focuses according to the discussions.

2. LITERATURE REVIEW

2.1. Concept of Public-Private Partnership

Public Private Partnership is a collaboration of the public and private sectors in the financing and developing of public goods and services (agriculture, communication, infrastructure, etc.). Many globally see this phenomenon as the new economic paradigm (Oyedele,2012)., PPP does not have a single universally accepted definition, and it differs in different contexts and scenarios. Various agencies define Public Private Partnership differently, as there is no universally accepted definition. Department of Economic Affairs, Ministry of Finance, India defines PPP means an arrangement between a Government or statutory entity or Government owned entity on one side and a private sector entity on the other, for the provision of public assets and related services for public benefit, through investments being made by and management undertaken by the private sector entity for a specified period, where there is a substantial risk sharing with the private sector and the private sector receives performance-linked payments that conform to specified pre-determined and measurable performance standards. Local Government Procurement Agency, UK defines "PPP as a generic term for the relationships between the private sector and public bodies, often to introduce private sector resources and expertise to help provide and deliver public sector assets and services. PPP is used to design, build, finance, and operate (DBFO) service contracts and formal joint venture companies". According to the Department of Environment and Local Government, Ireland, a PPP is a partnership between the public sector and the private sector to deliver a project or service provided by the public sector. PPPs come in various forms, but at the heart of every successful project is the concept that better value for money may be achieved through exploiting private sector competencies and allocating risk to the party best able to manage it.

, PPPs are long-term contractual arrangements between the public and private sectors for the delivery of public services in an efficient manner. This has become a popular investment model since the late 1980s and 1990s in the world. Common acceptance for PPP is "PPPs are ubiquitous in the delivery of infrastructure." However, they are widespread in most public services. In many countries, including Canada and UK, air traffic control is now privately owned and provided (Benz et al., 2004). Further, he mentioned that government funding for science and technology research is increasingly based on PPPs.

With respect to developing countries, agriculture research-driven PPPs are increasingly seen as a means of providing public research organizations with access to cutting-edge proprietary research tools, materials, and skills from the private sector to move products from concept into development and deployment (Pray, 2001; Pingali and Traxler, 2002; Spielman and Von Grebmer, 2006). These PPPs are also viewed as a means of providing the private sector with access to new or emerging markets in developing countries, locally specific scientific expertise and plant genetic materials, and opportunities to strengthen reputational integrity (Byerlee and Fischer, 2002; Hall, 2005).

2.2. Dimensions of Public-Private Partnership in Agriculture

Crop production, research, and development, product quality enhancement, extension, and marketing are the main facets of agriculture that can adopt the Public Private Partnership approach for functional and operational efficiency and effectiveness.

2.2.1. Research and Development

Private-sector investment in agricultural research has increased worldwide, accounting for approximately 35% of global investment in agricultural research and development(R&D), or $11.5 billion per annum during the mid-1990s.

Approximately 13% of this figure is invested in advanced research in agricultural biotechnology by the leading multinational firms and other, smaller firms that focus on biotechnology (Spielman,2006). Approximately 13% of this figure is invested in advanced research in agricultural biotechnology by the leading multinational firms and other smaller firms that focus on biotechnology (Byerlee and Fischer, 2001). However, these investments are rarely benefitted to the poor smallholder farmers in developing counties. Though many of the studies on PPPs focused on agricultural biotechnology, biosafety regulation, intellectual property rights (IPR), and ways of technology transfer in support of pro-poor in developing countries (Spielman et al. 2007), the impact of such research on small-scale, resource-poor farmers and other vulnerable agents is often ambiguous. Spielman (2004) indicated that as public sector Research and Development are unable to get the job done, there is an opportunity for the private sector to invest in R & D to improve the income and livelihoods of poor farmers with closer collaboration between the public and private partnership. This is particularly relevant in knowledge-intensive activities such as conventional plant breeding and advanced biotechnology research.

2.2.2.Extension

Public Private Partnerships can cover a wide range of areas in agriculture practices, including extension services which could disseminate new technologies among peasant farmers and enhance technology adoption for sustainable agricultural development. Agricultural Technology Management Agency (ATMA), India facilitated commodity-based groups to partner with private agencies in the production and marketing of basmati rice and medicinal plants in Bihar, maize in Andhra Pradesh, and mango in Maharashtra. Syngenta Foundation (www.syngentafoundation.org) in Kenya and Telenor group in

Thailand (www.telenor.com) 2008 took up a partnership approach to help farmers to get weather and market data using a mobile phone (Ponnusamy 2011).

2.2.3.Agricultural Marketing

The tremendous impact of PPP in any field depends on the involvement of institutions and industries in seeking collaboration and combining all available public and private skills (Peter 2002). PPP has made positive changes in the market linkage of farm produce, capacity building of farm families, reduction of risk and uncertainties, social mobilization, and economic empowerment of farmers (Hisrich and Peters 2002). The Model APMC Act of the Government of India encourages direct marketing to enable the farmers to get the best price for their products and create partnerships with banks, finance, and logistics companies for the lowest-cost financing and marketing. This would attract private investment in the creation of much-needed marketing infrastructure, create competition and ensure better service to the farmers (Anonymous 2005). In India, ICRISAT's Hybrid Parents Research Consortia brings together 34 small and medium-sized domestic firms to commercialize sorghum, millet, and pigeon pea hybrids, thus contributing to the commercial viability of both domestic seed firms and the broader seed market in India. Direct marketing, like ITC's e-Choupal and the National Dairy Development Board model of public-private partnership, provides a viable alternative for small farmers and should be replicated to provide a safety net to farmers through financial risk management and introduce effective Agricultural Insurance (Singh,2013).

2.3. Privatization and Public-Private Partnerships

Public Private Partnership and privatization are two different investment models. Privatization is transferring the ownership of a public asset permanently to the private sector, whereas PPP performs different tasks of the public sector in collaboration with the private sector. In PPP, liability lies with the Government. California Debt and Investment Advisory Committee defines privatization as "the term privatization is most commonly used to refer to any shift of government activities or functions from a public agency to the private sector." Further, it says it is an umbrella term used to account for greater private sector participation in the delivery of public services. Privatization has also been characterized as "sometimes leaving very little government involvement, and other times creating partnerships between government and private service providers where the government is still the dominant player." In privatization, sole responsibility goes to the private sector, while in PPP, responsibility is shared by the two parties.

2.4. Different Public-Private Partnership Approaches

The Finance Commission of Sri Lanka indicates that, at present, there are different public-private partnership approaches operated based on operational differences.

Management Contracts: This is an agreement between the Government and private sector relating to the supply of specific services on a short-term or long-term basis on limited terms. Mostly this method is applied for constructing rural roads, drinking water supply, and sanitation services. Here, government institutions undertake their responsibility in providing the relevant service continuously, and private sector involvement is according to the contractual agreement for providing and maintaining such service.

Provision of infrastructure facilities through small-scale private suppliers: This method emphasizes that PPP is not necessarily the partnership with large-scale private sector organizations but building the partnership with small and medium-scale enterprises. Most developing governments get SME support to provide public utilities or services. Small-scale water plants and drinking water supply schemes are some examples.

User fee Public Private Partnership: Under this method, planning, implementation, financing, and maintenance of certain infrastructural assets owned by the state agencies are assigned to a private party. This can be used for upgrading or widening such assets by assigning the responsibility to a private party for a specific period (25 or 30 years) under a concessionary agreement, and upon expiry, it is vested back with the Government. The collection of tolls from Highways can be given as a good example.

Public Private Partnership based on readymade service (availability-based PPP): Under this, the production of a service or its responsibility is assigned to a private party by the Government based on existing rules and regulations. Planning, investment, building, re-building, and management and maintenance rendered to a private party and the services purchased by the Government and distributed through a respective government agency or through a private company. Power generation is the best example of this type.

3. PUBLIC-PRIVATEATE PARTNERSHIPS IN AGRICULTURE; CURRENT GLOBAL PRACTICE

To date, the world practices of PPPs are quite extensive, and certain preferences when choosing specific areas, forms, and methods of the partnership of the state and private business have been designated. The most preferred sectors of the economy where the PPP projects are implemented in Europe are education (34%), transport (21%), and health care (17%) (Akimowa et al., 2016). Many countries in the world create modern agrarian business structures based on PPP principles to solve the problem of providing their populations with food (Pinaud, 2007). In foreign practice, government support in agriculture goes beyond the development of business and uses individual entities of the private sector to create public goods. Many foreign governments and development agencies recognize that the public sector needs to work with business entities relying on the comparative advantages of each of them to create public goods (Hartwich, 2012). In developing countries, PPPs are adapted in different ways in practice. India, a leading agricultural country in the South Asian region, PPP for the agriculture sector is developed through the strengthening of cooperation between industrial companies and universities in R&D. The process of PPP development in the agriculture sector began with mechanisms such as consulting, provision of contractual services, the commercialization of products and processes placed through the Indian Council of Agricultural Research. The National Agricultural Research system includes the Central University of Agriculture and 40 state agrarian universities until the dissemination and adoption of the newly invented technology. Thus, one of the most important factors of social development is knowledge, which defines the rapid development of an innovative economy. Competitive grants and tax benefits are provided by the Australian Government to promote and facilitate the mechanism of PPPs and increase the share of research and improve the interaction between the different actors of the innovation system. This makes the innovations to become a sustainable factor in the development of effective cooperation and the translation of research results into economic, social, and environmental benefits. PPP in the Russian agrarian sector is implemented mainly through the realization of targeted sectoral programs in accordance with one of the models: "State-agricultural producer," "State-agricultural holding (integrator-investor)," "State-self-regulatory organizations." (Akimowa et al., 2016). For private sector service providers in Ethiopia, the PPP investment modality offers an opportunity to have access to public powers and competencies as well as a significant influence on government decision-making with regard to urban development, infrastructure, service delivery, and other development activities. This is because, in PPPs, an allinclusive planning and decision-making process is entrenched, clearly understood risks are identified and shared, and functional capacities are developed to maximize efficiency gains (Asubonteng,2011).

3.1. Public-Private Partnership in Sri Lankan Context

According to the BOI publication, Sri Lanka officially inaugurated a PPP unit within BOI. After that, projects within the BOI were structured on a PPP basis. With the launching of the multifaced program on infrastructure development government has identified the importance of the establishment of a national body National Agency for PPP was established in July 2017. Again, in Sri Lankan Medium-Term Development Policy Framework (2011-2016) highlighted that the privatization of state-owned businesses is not the sole strategy of economic reform in Sri Lanka. As further described in the policy framework, PPP is a successful alternative funding method for uplifting infrastructure. As most of the current practices in PPPs in Sri Lanka for infrastructure development and service providers like road construction and powerhouse construction; Government has paid attention to future projects where the PPP investment approach to be widely used in the areas of Transport, Aviation, Milk and Dairy Farming, Tourism and Drinking water supply. However, in the Sri Lankan context, there is a common belief almost all the projects which are financially feasible or not should be implemented through government funding.

South Asian Countries like Malaysia and Thailand moved fast in economic development and have created a favorable environment for private investment through PPP. Following the experiences of neighboring countries, the Government's recent economic policy framework (Vision 2025) features PPPs as an integral part. Vision 2025 highlights the Government's commitment to encouraging PPPs to strengthen the country's growth framework. It identifies the importance of empowering the private sector and reducing reliance on public-sector borrowing in the provision of public assets and services.

3.2. Public-Private Partnership in Sri Lankan Agriculture

The Sri Lankan economy is presently transitioning from a rural agricultural economy towards a more urbanized economy driven by the service sector. At present, the share of the service sector in GDP is 56.8%%, followed by the manufacturing and the Agriculture sectors, which have shares of nearly 27% and the 7.9%% respectively, in the country's GDP. Even though the agriculture sector's share of GDP has declined significantly over the last two decades, from about 27% in the 1990s to less than 10% in 2018, around one-third of the population remains dependent on agriculture as a major source of income, with 28% of the country's labor force employed in the sector (Central Bank, 2018). At present, the Government has now placed agriculture sector development and water resources management at the forefront of its development agenda. Enhanced investment in farm and non-farm sectors is required for Sri Lanka's sustained economic growth, rural transformation, and poverty reduction**.**

An important part of a national economy is the development of small and medium enterprises, where the main task of a government is to organize and promote innovations, especially in a country like Sri Lanka, having agricultural economy has to focus on developing small and medium scale agribusiness. For that, active cooperation of public-private capital on the basis of PPP can be the better solution. Successful replication of PPP models across various production hubs for key commodities can change agriculture from an inefficient, supply-driven, low-value business scenario to an organized, high-tech, demand-led, and high-value orientation (Patel et al. 2007) and essential to incorporate learnings of previous PPP experiences (Soumitra 2007). PPP will be successful if the government policies provide a level playing field to all the stakeholders (Reddy and Rao 2011).

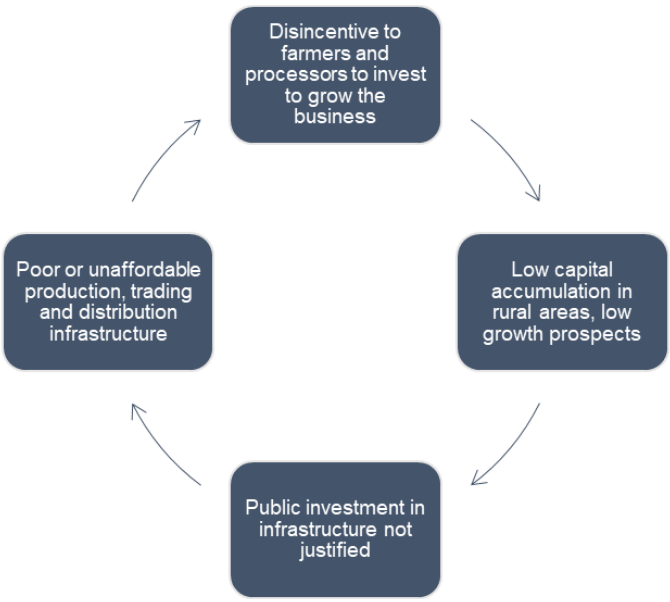
Sri Lankan government can seek private sector investment under the scheme to support PPP to fill the gaps in the agriculture sector to attract private investment in irrigation, common infrastructure in agriculture markets, and capital investment in the fertilizer sector. World Bank document on Framework Development and Infrastructure Financing to Support Public Private Partnerships in Sri Lanka clearly mentioned that there is vast untapped capacity in the agriculture and fisheries sectors in the Northern and Eastern regions, following the dawning of peace, restrictions both in fishing (fishing areas, durations, permitting radio tracking, multi-day fishing, high-speed outboard motors, etc.) and agriculture (lands becoming unlocked after de-mining) in these areas have been dismantled. With production capacities increasing, there are opportunities for related industries in agro-processing (spice products, fruit and vegetable canning, jams, cordials, food products, etc.) and fish-processing and related activities (fish canning, ice production, etc.) to take off. The Overarching Agriculture Policy (2019) document developed by the Department of National Planning clearly indicated that energizing domestic farm-market linkages and the rural economy is a priority on the way forward, and it could be achieved through the development and growth of market-oriented value chains and assisting producers to obtain a fair share of market prices is a desirable goal that can be achieved through the strengthening of information networks for informed-decision making by the agricultural practitioners, providing extension and training, promoting private-public partnership, facilitating competitive and commercially-oriented agriculture through appropriate changes made to regulatory enactments, and providing timely agricultural inputs at affordable prices, and appropriate risk management options. Further, it encourages PPP in Agriculture through the policy statement, "Encourage agricultural diversification in value chains through a balanced and streamlined approach using public and private goods and services to promote commercial agriculture**.**”

3.3. Existing Gap

A major, if not the major, component of competitiveness in agricultural value chains is the cost of infrastructure to support on-farm production, facilitate efficient trading and exchange, add value through processing, and transport produce from the farm gate to the processing facility and on to wholesalers (Warner et al., 2009). Further, the lack of post-harvest storage facilities for producers (cold storage, grain silos, etc.) is also a significant constraint on agricultural development and market instability in Sri Lanka.

According to the annual performance report of the ministry of agriculture, due to budget limitations, the Government is unable to provide renovation, modernization, and extension of agricultural infrastructure up to the requirement and the higher investment in research and development. Therefore, the attraction of additional investment can be satisfied by introducing public-private partnerships that provide some incentives for private capital (tax and credit preferences, access to attractive and closed areas of management, the sole right to provide certain services for a defined territory, etc. The international practice (Ferroni, Castle 2011, De Man 2009, Warner et al. 2009) demonstrates how the implementation of PPP provides significant benefits for the state, private sector, and local communities.

Figure 1: Poor Infrastructure and Low Agricultural Development:



Source: Warner et al., (2009)

4. CONCLUSION

As Sri Lanka requires to invest more in agriculture to address the critical issues of productivity and marketing, research and development, and qualitative and quantitative aspects, technological innovations to facilitate the agricultural export partnership approach will be the optimal solution. In order to move forward with the concept of agriculture modernization, planners and policy makers have to look for opportunities to encourage farmers and agricultural producers to adopt 'modern' technology through a partnership approach. For PPP to be successful, it is important to identify clearly the roles and responsibilities and the way of sharing resources and benefits, which leads to a win-win situation. Identification of the right partners is a crucial factor in the planning of a PPP model for better agriculture prospects. Therefore, the Sri Lankan government has to pay attention to revising policies and facilitating the environment to accommodate PPP as an innovative approach to agricultural sustainability.

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