Chapter 2

AGRICULTURAL POLICIES AND ITS IMPLICATIONS TOWARDS AGRICULTURAL DEVELOPMENT IN SRI LANKA

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1. INTRODUCTION

Increased production of food and cash crops and higher rural incomes are the important objectives of governments in developing countries today. The governments have made considerable attention in achieving these objectives utilizing significant public investment and foreign funds in order to improve physical infrastructure in rural areas, expand irrigation schemes and organize research and extension in agriculture. Like many other developing countries, the successive Sri Lankan government have also been undertaken several economic policy reforms, in an effort to raise production and productivity in the agricultural sector over the last decades.

Sri Lanka is a developing country with an area of 65,610 sq. kilometers, with 62,705 sq. kilometers of land and 2905 sq. kilometers of water, and a population of 21.8 million as estimated in 2019 (Central Bank of Sri Lanka, 2019). Approximately, 70% of the population of the country live in rural areas and their main livelihood can be identified as agriculture and agriculture-related activities. Sri Lanka has a long-standing history for the agriculture industry since it was one of the foremost agrarian societies in the world during the ancient kingdoms.

In Sri Lanka, agriculture employs 27.1% out of the total population but only contributes to 7.3% of the nation's Gross Domestic Products (GDP) (Central Bank of Sri Lanka, 2020). According to the Central Bank Annual Report of 2019, agricultural activities have recorded only a marginal growth during the year with a decline in critical activities including fishing and growing of some major crops, mainly due to weather-related disturbances.

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Like many other developing countries, Sri Lanka faces macroeconomic imbalances despite improving literacy, health, and life expectancy. The major economic problems of the country were associated with limited foreign exchange, budget deficits, unemployment, inflation, poverty, and the consequences of a slow economic growth rate (Goonaratna and Wesumperuma, 1994). Hence, the development policies and programs successive governments since independence in 1948 had been aimed at overcoming these macro-economic imbalances and in this connection, agriculture sector development had been largely identified as the area priority area to address the most economic and social challenges faced by the country.

There are many descriptive as well as analytical analysis available on macroeconomic policy reforms and development in the agricultural sector since 1950. Since these studies dealt mainly with the implications of macro policy reforms, a comprehensive economic analysis of agricultural policies is yet to be undertaken. An attempt, therefore, has been made in this paper to review trends and performances of the agricultural sector, paying special attention to the liberal policy reforms implemented since 1977 with a particular focus on some important agricultural policies.

Previous studies that examined various aspects of agricultural policies under different economic regimes during 1970-97 include Bhalla (1991), Dunham (1992; 1993), Edwards (1993), and Gunawardana and Somaratne (1999). Bhalla (1991) deals with the political economy and determination of food crop prices, and Dunham (1992) examines the productivity and commercialization of non-plantation agriculture. Dunham (1993) deals with crop diversification and exports from the non-plantation sector. Edwards (1993) examines the protection provided to food crops from import competition. Athukorala and Kelegama (1998) discussed Sri Lanka's agricultural policy initiatives under URAA (The Uruguay Round Agreement on Agriculture) and Gunawardana and Somaratne (1999) analyze the impact of different economic regimes on economic performance of non-plantation agriculture during 1970-97. Henegedara (2002) reviews agricultural policy reforms in the paddy farming sector in Sri Lanka with special reference to liberal policy- reforms followed since 1977 in his article.

2. MARKET FAILURES AND ROLE OF PUBLIC POLICY

Market failure can justify a government intervention on market efficiency and it can be stated as the inefficient operations of price systems and eventually resulting in the societal issues. In the economic term, we can say that Pareto optimality has not been reached. According to Vilfredo Pareto (1906), Pareto efficiency or Pareto optimality is an economic situation, which connected inversely the betterment of a person. Generally, one person suffers worse off when the one individual is allocated with necessary resources to make its betterment.

In another way, considering the market equilibrium concept, market failure occurs when there are too few or too many resources used to produce goods or services. Generally, market failures occur due to imperfect competition in a country, externalities, and public goods. The government in any country can play an essential role to remedy these problems. Externalities are the key type of market failure that the government tries to address in regulations and laws.

The externality is considered as an effect of the actions of a person on the bystander's well-being that has not been compensated yet (Mankiw, 2007). Externalities can be either negative or positive. Hence there are two types of externalities, as a positive externality and negative externality. Further, competitive markets also face failures in their operational activities due to the availability of externalities (UKessays, 2018). In the determination of demand and supply usually the actions of the buyers and sellers have been ignored by themselves. Hence the market equilibrium shows frequent inefficiencies.

Several public policies are implemented by the government in order to overcome market failures even in Sri Lanka. In general, public policy can be defined as a system of laws, regulatory measures, courses of action, and funding priorities concerning a given topic (Kilpatrick, 2010). These public policies are also used to address societal concerns that are associated with private market economies, such as economic inequalities. Price controls, corrective taxation, subsidies, and regulations are some examples of public policies that are used to correct market failures. Hence, the government can use market-based policies to overcome externalities, such as command and control policies such as legislation, corrective taxes and subsidies.

In summary, when market failures occur, it is indeed important for the government to implement different types of public policies to remedy it. By using tax, subsidies and also using legislations, the government could solve market failures.

3. MAJOR ECONOMIC POLICY REGIMES (HISTORY FROM 1948-1977)

Over the past seventy years since independence (1948), three distinctive periods could be identified relating to political ideology and development priorities (Henegedara, 2002). From 1948 to 1970 period, four administrations were formed by the two main political parties, the United National Party (UNP) (1948-1955), the Mahajana Eksath Peramuna (MEP) led by the Sri Lanka Freedom Party from 1956-1960 and 1960-1964, and again by the UNP (1965-1970).

Development policies and programs adopted during this period were mainly based on mixed economic policies. Thus, policies followed during the early five years (1950-1955) were biased towards open economic policies while after 1956, the government exercised greater control over economic policies (Athukorala, 1994, Rajapathirana, 1989).

Open economic policies were followed by the United National Party (UNP) government from 1948 to 1956 while exercising some restrictions on imports and exchange due to limited foreign currency reserves.

In 1956 the MEP led by the Sri Lanka Freedom Party (SLFP) came to power and prepared a ten-year development plan (1958-1968). In this time period, the industrial sector was recognized as the key sector, and priority was given to import substitution, and measures were taken to manage the economy through implementing controls such as rationing, quota systems, subsidies, and import and export taxes.

The 1960-1964 government which was formed by the Sri Lanka Freedom Party continued state intervention policies and considered the state sector as the focal point of development. Many private companies were nationalized and state corporations were established during this period. In 1965, the UNP government came to power once again and for the next five years followed mixed economic policies favouring partial liberalization programs such as currency devaluation, dual exchange rates for essential and non-essential imports, and tariff reforms (Athukorala and Jayasooriya, 1994). An accelerated food production program (food drive) was implemented during the period to save foreign exchange as there was a sharp increase in the world market price of rice (Ariyaratne, 1998).

During 1970- 1977, there was a heavy emphasis on import-substitution under a protectionist framework and profound government intervention in both domestic and external economic affairs (Gunawardena and Somaratna, 2000). The ruling United Front government led by the Sri Lanka Freedom Party imposed restrictions on imports of food and agricultural inputs. A five-year development plan emphasized greater state intervention covering almost all activities (Five-Year Development Plan). Thus the government adopted a quota system, rationing, and permits as the main instruments to control the domestic economy while imposing some regulations on domestic rice distribution and trade. These policies were aimed at gaining self-sufficiency in food production and reducing pressure on the balance of payments which were affected as a result of the global economic crisis in the early 1970s. Land reform policies were introduced during the period by acquiring tea, rubber and coconut estates and imposing ceilings on land ownership.

4. ECONOMIC POLICIES AFTER OPENING UP THE ECONOMY 1977

Liberal economic policies were introduced from 1977 and from 1978, governments have implemented far-reaching economic reforms under an open economic framework. The United National Party (UNP) was in power for eighteen years from 1977 to 1994, and from 1994 to date, the People's Alliance government has been in office. The policy changes made during these two consecutive periods, fall into three policy regimes: the first wave of liberal policy reforms (1977-1988), the second wave of liberal policy reforms (1989-93) and the current policy regime: after 1994 (Gunawardena and Somaratna, 2000).

Since 1978, governments have implemented far-reaching economic reforms under an open economic policy framework. The reforms included the reduction of protection provided to import-competing sectors, exchange rate adjustments, fiscal and monetary reforms, liberalization of domestic factor and product markets, and privatization of some government business enterprises (Athukorala and Jayasuriya, 1994; Bandara and Gunawardana, 1989; Cuthbertson and Athukorala, 1991; Lakshman, 1994; Rajapathirana, 1988; Gunawardena and Somaratna, 2000).

The time period from 1977 to 1989 considers as the First Wave of liberalization. In this phase, the economy was transformed from a closed structure to an open economic structure in order to achieve the overall objective of liberalization. A wide range of economic reforms was introduced during the period with the aim of increasing economic growth, decreasing unemployment, improving the balance of payments, and stimulating savings and investments. Thus, policy reforms introduced since 1977 could be grouped under five main areas as Pricing Policies, Trade Policy, Monetary Policy, Fiscal Policy and Institutional Reforms (Athukorala, 1986; Kelegama, 1990; Somaratne and Gunawardena, 2000).

During this period, the UNP government implemented a wide range of economic reforms in order to accelerate economic growth, create employment opportunities, increase capacity utilization, stimulate savings and investment, improve the balance of payments and achieve international competitiveness (Athukorala and Jayasuriya, 1994; Rajapathirana, 1988).

The introduction of the 'open economic policy' in 1977 has led to the elimination of most of the controls, which operated in domestic factor and product markets under the previous government. Major fiscal policy reforms included the replacement of generic (non-targeted) food subsidies with a targeted Food Stamp Scheme in 1978 and the reduction of fertilizer subsidies. Reforms in the financial sector including financial deregulation, which allowed the operation of the private sector in banking and finance, while easing the availability of credit, pushed up interest rates (Lakshman, 1994). During this time period, Government concessions on agricultural credit were reduced.

The second wave (1989-93) of liberalization reforms commenced in 1989 under the new leadership of the UNP government. These reforms were intended to overcome the macroeconomic imbalance due to the mismanagement of the economy and to the accelerated development programs introduced since 1977. The second wave of liberalization reforms took the form of structural adjustment programs (SAP) as recommended by the World Bank. These included low profile adjustments such as reducing the maximum nominal tariff on imports and devaluation of the rupee, high profile projects such as privatization of public corporations and enterprises, export-oriented industrialization and poverty alleviation programs (Dunham and Kelegama, 1994).

The newly elected United Front government in 1994 continued with the liberalized economic policies implemented by the previous regimes during 1978-93. However, the new government emphasized a balanced approach to development, growth with equity and poverty alleviation (PA manifesto, 1994; Henegedara, 2002).

Policies followed after 1994 were mainly focused on removing hidden discrimination and distortions of the market. Private sector participation was encouraged by eliminating restrictions on institutional and technical barriers such as land ownership, credit, and infrastructure (Policy Statement of the Government of Sri Lanka, 1995). The privatization of government corporations was further promoted by encouraging multinational companies to invest.

Over the next two decades, the country experienced severe internal political instability because of the ethnic war within the country. This conflict has made huge cost to the economy. As estimated by Arunatilake, Jayasuriya and Kelegama (2001), the cost of the war from 1983 to 1996 was, equivalent to twice Sri Lanka's GDP at a minimum. The cost during the post-1996 period, when the conflict escalated, is likely to have been much higher, and the economy was buffeted by several serious external shocks including the 1997 Asian Economic Crisis, the 2004 Tsunami disaster, surge of world oil and food prices during 2007-2008, and the global financial crisis that followed. Nevertheless, the Sri Lankan economy demonstrated a remarkable degree of resilience; GDP growth averaged 5.3% in the 1990s and 5.5% per annum during 2000-09.

5. Selected Agricultural Policies and Its Impacts

Agricultural activities in Sri Lanka operate within a structural framework of national policies and sector wise policies. These national policies are focused on addressing the many economic, social and environmental challenges in the country and it provides guidance to a sustainable path. Current government policies also aim to meet the ambitious sustainable development goals by 2030. There are several policy and strategy documents covering agricultural activities in Sri Lanka. These include the National Agriculture Policy, which was introduced in 2007 by the Ministry of Agriculture with key aims of assuring food security, ensuring environmental sustainability and developing economic opportunity. Other key policy documents include the National Land Use Policy (2007), National Plantation Industry Policy Framework (2006), National Livestock Policy (2006), Sri Lanka Rubber Industry Master Plan 2017-2026 (2017), National Fisheries and Aquaculture Policy (2018), National Policy and Strategy on Cleaner Production for the Agriculture Sector (2012), and National Agricultural Research Policy and Strategy 2018-2027 (2018). While several of the existing policy documents need updating, they are still relevant in guiding government interventions in the sector and relevant sub-sectors.

Government interventions towards improving agriculture and food production have focused on investments in a number of areas including irrigation, research and development, and training, education, and dissemination of knowledge.

Irrigation development, initially undertaken with the reconstruction and rehabilitation of ancient tank networks, have transformed towards major river and catchment management schemes with land development for rice cultivation as the primary motive. The fertilizer subsidy scheme, introduced in 1962, was intended to increase productivity and support the adoption of modern high-yielding rice varieties and other food crops. In the tree crop sub-sector, the development of new high-yielding cultivars coupled with replanting and new-planting subsidy schemes have supported the participation of smallholders in the production of tea, rubber and coconut. In food crops, interventions have focused on the provision of research and development, pest and disease control, extension and knowledge transfer, and high-quality seeds.

There also are programmes aimed at improving the regulatory environment to support more efficient and stable functioning of agricultural markets including expansion and operation of a system of markets, establishment of product certification and quality standards, provision of services to support the adoption of good agricultural practices and programs aimed at improving food safety and promoting exports of fresh and processed food products. Governments have also intervened rather directly in markets through adjusting tariffs and imports of products sensitive to food security and farm incomes.

In general, the thrust of policy in recent years has been a departure from the import substitution policies and strategy of the 1970s. In the 1970s and subsequent years, import substitution policies supported domestic food production through producer support programs such as state procurement, guaranteed price schemes, quantitative restrictions on imports, tariff adjustments, state marketing boards, and concessionary comprehensive rural credit and crop insurance schemes. The government continues to provide subsidized seed and fertilizer, free irrigation water, publicly funded research and extension services, marketing infrastructure, and price guarantees for paddy, selected food crops, and milk. It also provides a range of financial and economic incentives such as cultivation credit at reduced interest rates, tax exemptions and concessionary financing for developing, processing, value addition and exporting of farm produce.

5.1 Fertilizer Subsidy Policy

Paddy farming advocates as a critical role player in the economy of Sri Lanka as same in the other Asian countries. Main cause behind this is noted as the recognition rice as the staple food of the majority of the population in Sri Lanka. Hence the production of nationwide paddy requirement is a crucial task of the domestic farming sector based on the paddy cultivation. Further, this is considered as a significant direct employment generating source in the rural areas. Simultaneously, considerable number of employment opportunities are generated through the backward and forward linkages of paddy farming.

Since the indepednece, still the governments are highly focusing and prioritized the paddy cultivation since its significance in the economy as a strategically important production process which intensifies the development policy frameworks. In addition, there is a three-fold public policies related to the paddy cultivation. The first is of expanding the land area used to grow paddy and secondly enhancement of th eproductivity is aimed. At last, lowering the uncertainties associated with the paddy farming is focused through the public policies (Semasinghe, 2014).

The Government of Sri Lanka has introduced a large number of policies and programs to increase agricultural productivity mainly focusing on paddy production since independence. The fertilizer subsidy program is one of the longest-lasting, most expensive, and most politically sensitive policies implemented to promote rice cultivation in Sri Lanka (Weerahewa *et el.*, 2010). It was initiated in 1962 with the introduction of High yielding Varieties (HYVs) as an effect of the green revolution. The main objective of fertilizer subsidy which is the most controversial input subsidy is to encourage farmers to switch from traditional rice varieties to high-yielding varieties (HYVs) that are highly responsive to chemical fertilizers.

These HYVs are highly inorganic fertilizer responsive. Therefore, it was necessary to encourage paddy farmers to use fertilizer adequately and to ensure that fertilizer is available at affordable prices. It was expected that cost of paddy production would reduce and land productivity would increase resulting in more profitable paddy farming by the use of fertilizer with HYVs (Weerahewa *et al.*, 2010). Profitable paddy farming was the ultimate expectation of the policymakers and due to the lower prices of the fertilizers HYVs adoption would be enhanced. Hence the productivity of the farming lands also can be improved while considerably lowering the costs associated with the production processes. Similarly, when the production cost is lowered, it directly leads to the paddy and rice price reductions. Thus, specially, the poor people and the other end users in the urban areas are provided with the rice at an affordable prices without any scarcities.

The fertilizer subsidy policy in Sri Lanka took three distinct forms over the years (Ekanayake 2006; Central Bank of Sri Lanka 2007–2009):

1. Category I: Subsidy provided for all three main fertilizers (1962–89, 1995–96, 2006– 09)
2. Category II: No subsidy provided for any type of fertilizer (1990–94)
3. Category III: Subsidy provided only for urea (1997–2005)

The subsidy program initiated in 1962 and then paddy farmers also facilitated with a fixed fertilizer subsidiary for the paddy farming. Thereafter, from 1962 to 1975, different fertilizers were under different subsidized rates applied on the fertilizers. Thus the subsidizing scheme was not appreciated by the interested parties due to the availability of space for the transferring of the fertilizers allocated to the paddy crop to the other crop types (Ekanayake 2006). After that, uniform subsidy rate as 33% was applied to all types of crop sectors in 1975 while many price revisions for the chemical fertilizers were taken into account til 1988 by the particular policymakers. However, by August 1988, no subsidies for Sulphate of Ammonia (SA) and Rock Phosphate (RP) were allowed. In contrast, Urea, Triple Superphosphate (TSP), Muriate of Potash (MOP), and the Nitrogen Phosphorus- potassium (NPK) mixture were under subsidized prices. During the period from January 1990 to October 1994, no any fertilizer subsidies were allowed. Again after 1994, Urea, SA, MOP, and TSP were aligned with variable subsidies which further leads to the fixed prices at the retail level (Weerahewa et al., 2010).

Fertilizer subsidy which was implemented after 2005/06 *Maha* season, specifically focused on the small paddy farmers, field owners and, tenants who are entitled to the farming lands below five acres. Through that subsidy program, those farmers were granted a subsidy for all of the three main fertilizers including Urea, TSP, and MOP and those were sold at a fixed price of Rs. 350.00 per a 50KG package (US$3.48 based on the exchange rate in the year 2005). In addition, farmers with farming lands below five acres who were subsidizing on the paddy cultivation and tea, rubber, coconut and other plantation crops were entitled to the fertilizer subsidy after 2006. Then, the paddy cultivators had to supply a fixed amount of paddy harvest to the government at a pre-determined price which does not over the existing market price since the year 2009 as a result of the implementation of the paddy procurement policy and coupling of that policy with the fertilizer subsidy policy.

Agrarian Service Centres (ASCs) of the Agrarian Services Department is responsible for the distribution processes of the subsidized fertilizer to the particular paddy cultivators. In addition, Tea Smallholdings Development Authority (TSHDA) is responsible for the fertilizer subsidies allocated to the tea production and the Rubber Development Board (RDB), and the Coconut Cultivation Board (CCB) are the administering bodies who are distributing the subsidized fertilizers respectively to the rubber and coconut production.

However, empirical studies provide mixed evidence over impact of fertilizer subsidy on paddy production in the country. According to paddy production statistics, it is reported the sluggish or staggnated nature of the productivity improvement of paddy sector since 1980s in the country. For instance, per hectare paddy production in the country has increased from 3,566 kg to 4,372 kg by only 22.6% during the period from 1985 to 2016 even though continuous implementation of the fertilizer subsidy in the paddy sector (Central Bank of Sri Lanka, 2017). Declining profitability of paddy farming has also been reported by many studies even though one of the aims of the fertilizer subsidy was to improve the net gain of the paddy farming in the country (Prasanna & Ranathilake, 2018). The government expenditure on fertilizer subsidy has become a heavy burden on the budget (Wijetunga, et al., 2008; Weerahewa, et al., 2010) and it aggravates with escalating import price of fertilizer (Rajapaksha & Karunagoda, 2008). It also has a serious of unsolicited macroeconomic implications. For instance, in 2017, the government expenditure on fertilizer subsidy was Rs. 30.4 billion (Central Bank of Sri Lanka, 2017). The subsidy covers more than 90% of total import cost of fertilizer. As stated at the outset, rural economy is largely based on paddy cultivation. Thus, the agricultural policies of the government have greatly focused to increase the per acre paddy yield and paddy production in order to enhance the net earnings of rural paddy farmers through increased marketable surplus. Among the policies, fertilizer subsidy program is the most expensive and politically and socially sensitive program. Some studies argued that impact of fertilizer subsidy policy on productivity of paddy farming in long run would negative due to its negative impact on soil fertility (The World Bank, 2003). It is also question the contribution of the subsidy policy to motivate farmers to utilize organic manure in farming which are environmentally and economically sustainable. It is also reported a number of issues related to fertilizer subsidy policy such as quality of fertilizer, over application of fertilizer at the field, administrative issues, corruptions, etc.

The existing state of knowledge in the field revealed a mixed effects of fertilizer subsidy policy on productivity of paddy farming – positive effects (Abeygunawardhana & Arden, 1986; Herath, et al., 2013; Yamaguchi & Sanker, 2007; Bandara & Jayasuriya, 2009; Jayawickrama & Sudarshani, 2010; Weerahewa, et al., 2010) and no significant effects (Ekanayake, 2006). Aluwihare & Kikuchi, (1991) emphasized need of suitable rice varieties which are more responsive to fertilizer to gain real effects of fertilizer subsidy. Some studies suggest gradual withdrawal of fertilizer subsidy in parallel with effective alternatives such as marketing and extension oriented policies (Ekanayake, 2006). Some studies argued that fertilizer subsidy has been given to the farmers, particularly to the marginalized farmers, in order to avoid adverse effects of government policies on farming communities (Ekanayake, 2006). These studies also noted the positive effects of fertilizer subsidy to improve living standard of poor farmers and reduce their burden on variable cost (Herath, et al., 2013; Wanninayake & Semasinghe, 2014).

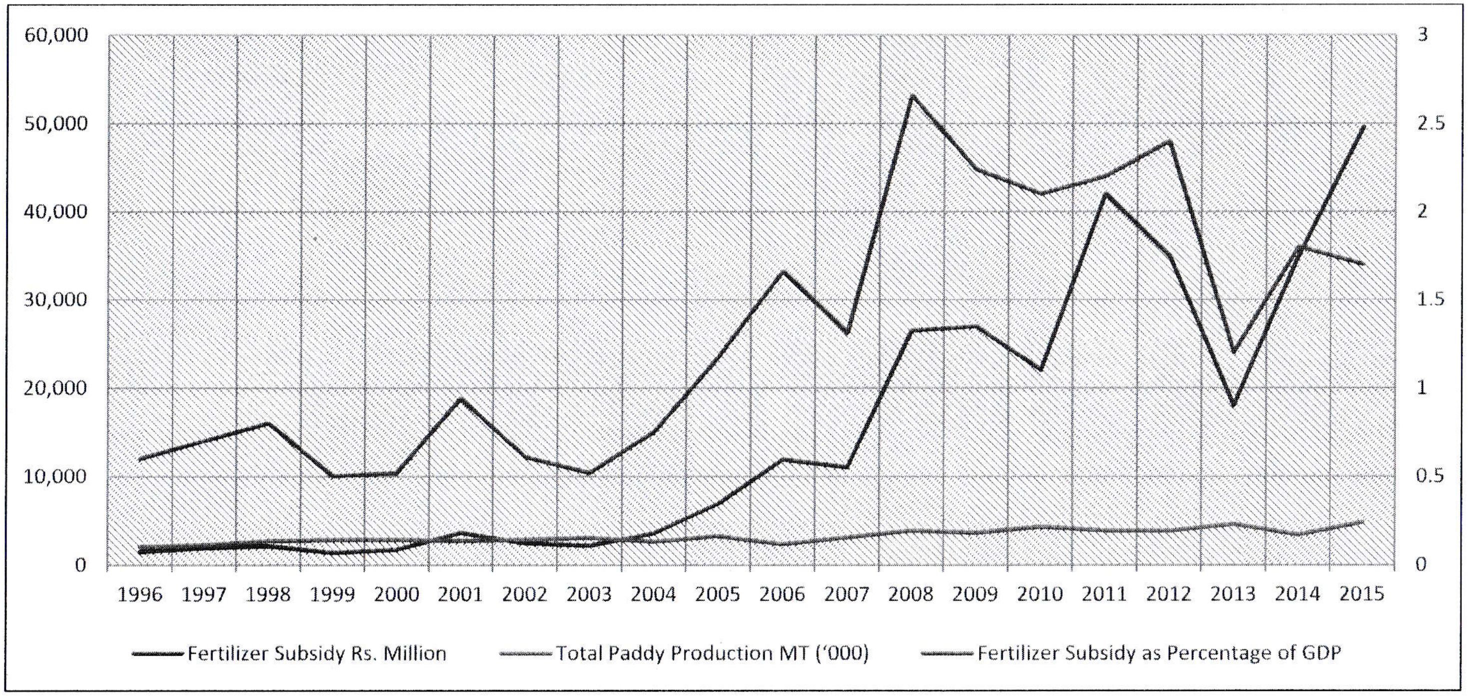

Figure 1: Trends of fertilizer subsidy and total paddy production in Sri Lanka, 1996 – 2015
Source: Central Bank of Sri Lanka, Annual reports

5.2 Food Price and Production Policies

From 1978-2004, Sri Lanka adopted a broad liberalization policy and made a significant change in the economic policies that minimized state governance and regulations (Dunham and Jayasuriya, 2000; Bandara and Jayasuriya, 2007). The market was allowed to determine input and output prices and resource allocation with minimum government intervention (Edirisinghe, 1987). This change emerged in 1977 as a result of the United Nations' victory.

This era saw a sharp curtailing of food subsidies. The Rice Ration Program was replaced by the Food Stamp Program, in which the price of food commodities was kept undistorted. Public monopoly in rice imports was also removed. High tax rates on sugar were curbed. The protection which was imposed on red onion and chili was decreased.

Rice, chili, onion and potato were not fully liberalized and rice prices were not allowed to be determined by the market due to the importance of rice as the staple food of the economy. The government attempted to protect paddy producers through nontariff barriers on rice imports while trying to stabilize rice prices reasonably (Bandara and Jayasuriya, 2007; Weerahewa, 2004). Since the early days of liberalization, protection for potatoes increased sharply. Even though the import of potato was liberalized in 1996, the policy was reversed soon after the imposition due to adverse impact of the policy on smallholder potato farmers in the country (Bandara and Jayasuriya, 2007). Until 1997, imports of chili, onion, and potato were subjected to licensing requirements, and the number of imports was determined by the state based on the countries' domestic supply and cost of living. However, protecting domestic farmers was the major thing in reality (Athukorala and Kelegama, 1998; Ratnasiri et al., 1999).

Apart from these major changes, the government initiated the Accelerated Mahaweli Development Project which was started with substantial foreign assistance to increase the extent under cultivation of rice (Bandara and Jayasuriya, 2007). Apart from that, in 2004, the government launched a national level program to establish 1,000 "dairy farming villages" throughout the country with the aim of increasing local milk production. The government assisted farmers in these villages to build better cattle sheds, biogas units, and containers, in addition to providing them with better education on dairy farming (Koralegedara et al., 2017).

The rice ration scheme which continued three decades was replaced by the Food Stamp Program with a swing in the political regime. Under this program, households with an annual income of less than Rs. 3600 (with marginal adjustments for larger families), were made eligible to receive food stamps and the total value of the stamp received by a family depending on the number of family members and their ages (Herath, 1981).

In 1989, after the re-election of the UNP, the food stamps entitlement was removed and instead the Janasaviya Program (People's strength) was introduced. It became the critical poverty alleviation program in the country. All the beneficiaries of the Food Stamp Program were entitled to its benefits from the Janasaviya program at the beginning and soon after its implementation, the program came up with its screening criteria to select the recipients (Rassas et al., 1993). From this program only households who earn less than Rs. 700 per month were eligible to receive the benefits.

In 1996, the Samurdhi Program (Prosperity) was begun and it was also not a direct food assistance program, but an income transfer plan similar to the Janasaviya Program. Households with less than a monthly income of 1000 are entitled to it (Koralegedara et al., 2017).

Mahinda Rajapaksa, the presidential candidate of the United People's Freedom Alliance (UPFA), a coalition of the SLFP and other minor political parties, won the presidential election in 2004, and his main election promise was "a new version of achieving a balanced growth." Yet again in 2010, he called for a presidential election after combating the three decade–long war and obtained a remarkable victory. The key objective of government food policy during this era was to safeguard producers from imports and consumers from high food prices. Since that Government presented the National Policy on Agriculture and launched a 3-year national campaign under the theme "*Api Wawamu Rata Nagamu*" (let us cultivate and uplift the nation) in 2007 with the aim of promoting local food production. During this time period, several measures were taken up to promote domestic dairy production and these measures include importation of exotic breeds to the country, imposing a guaranteed price for fresh milk and facilitating the dairy farmer with technical knowledge, cattle sheds, grasslands, and marketing facilities for their products (Kelegama, 2010).

During the period of 2015- 2019, after Maithreepala Sirisena came to the power from the new democratic front in 2015, the key government policy objective was to achieve self-sufficiency in maize, chili, onion, soybean, and potato by 2018 through productivity improvement and crop diversification. Furthermore, the government has directed efforts to commercialize subsistence agriculture. To increase the productivity of the agriculture sector, the government has proposed to remove import tariffs pertaining to the import of agricultural machinery and promote public-private partnerships. Furthermore, incentives were suggested to be provided to companies that use advanced technologies in the production process (Ministry of Agriculture, 2016).

5.3. Land policy

The land is one of the most ultimate resources of a particular country or a nation for their survival and also the development. Hence, policies related to the land occupy a central place in human society in any country.

There are some major constraints which affect the inefficient land utilization such as the skewed distribution of lands, inappropriate land policies, outdated regulations and dysfunctions of institutions relating to land management in most developing countries.

In Sri Lanka, approximately little over one-third of the total land area of the country is in the agricultural sector, where more than half of the population is mainly engaged in subsistence farming. Considering Sri Lanka, more than 80 percent of the land is under the control of the state as of 1985, through various legislations, ordinances and acts activated intermittently, even after fifty years of independence (Herath, 2006).

Sri Lanka has had a long history of civilized societies, which stretch back to about 6th century B.C or beyond. According to Siriweera (1994), there is no clear evidence of arrangement regarding the rights to land, though there is a controversy among the historians on the role of the king in relation to land, as to whether it was absolute over-lordship or only a trusteeship, throughout the long period of history which stretch back about 6th century B.C or beyond (Siriweera, 1994).

When considering the historical evolution of land policy in Sri Lanka, there are two major episodes that can identify as pre-independence and post-independent era. Crown Land Encroachment Ordinance: 1840, Acquisition of common property land to the state, Development of plantations, First Land Commission: 1927, Land Development Ordinance: 1935, Alienation of state land to landless peasants were the mainly highlighted policies which were implemented during the pre-independence (Senaratne, 2017).

In 1815, with the intrusion of British rule, the traditional feudal and semi-feudal arrangements were changed as the British rulers were interested in plantation agriculture which was characterized by large-scale agriculture involving large-sized holdings, heavy use of capital and labor and production for export (Herath, 2006). The old-age system of service tenure of the country was abolished in 1932, and as new legislation, in 1840, the Crown Land Encroachment Ordinance (CLEO), in order to obtain more land for the expansion of the plantations, which caused the transfer of nearly 90% of the total area of land to the Crown (Maddumabandara, 2000). The vast tracts of land gained by the ordinance were sold cheap to those investing in export crops, principally coffee at that time. It was estimated that 1.1 million acres of crown land were sold during the period of 1833 to 1866 and of this, nearly 230,000 acres were sold during the period of 1840 to 1843, and before 1840, less than 80,000 acres had been sold (Vander Driesen, 1960; Jogaratnam, 1964). Much more land was expropriated by the states amounting to about 500,000 acres for the expansion of the plantation sector, with the introduction of the 'Registration of Temple Land Ordinance of 1856' and under this considerable amount of this was under the control of temples (Sessional Paper, 1990).

As a result of the Waste Land Ordinance of 1897, the plantation sector grew rapidly compelling the British rulers to seek new avenues for more land (Peiris, 1996). The Partition Ordinance of 1863, Land surveys Ordinance 1863, Services Tenure Ordinance 1870 were the other pieces of legislation that served to formalize the process of land transactions, but basically it has been conceptualized as a means of fostering the growth and development of the plantation sector.

In order to facilitate the irrigation requirements of the alienated lands of the dry zone under Land Development Ordinance of 1935, the irrigation Land Ordinance which was enacted in 1946. This was amended in 1951 and 1968. The Temple Land (Compensation) Ordinance of 1944, Crown Land Ordinance of 1947, Land Acquisition Act of 1950, Requisition of Lands Act of 1950, with a few other acts related to rubber plantation were the other legislations enacted regarding to the land (Herath, 2006). One such relation to the rubber and tea plantation was the Tea and Rubber Lands Fragmentation Act of 1958.

Paddy Land Act of 1958 was landmark legislation which was come soon after the independence of Sri Lanka. By this act, tenancies were made heritable and rental payments were fixed at a quarter share or 10 bushels of paddy whichever was less (Jogaratnam, 2001). Farmers got more opportunities in decision making in their cultivation from this act. The act provided the power of establishing cultivation committees with elected representatives of farmers to oversee the maintenance and development of irrigation works; control water issues and collects irrigation charges. The act empowered the tenant paddy farmers, as most of them were the marginalized poor in the peasant sector (Herath, 2006). In the same year, the Tea and Rubber Lands Fragmentation Act was also enacted.

Land Reform Law of 1972 was one of the revolutionary steps inland policies of Sri Lanka and also it was the most important piece of legislation after independence. Under this law, the Ceiling on private ownership of agricultural land respectively at 25 acres for paddy land and 50 acres for other land was fixed.

Following the Land Reform Law No.1, the Agricultural Productivity Law No.2 of 1972 was enacted in order to ensure the proper utilization and development of all acquired lands. With the objective of providing security of tenures to tenant cultivators of paddy lands, The Paddy Land Act of 1958 was replaced in by the Agricultural Lands Law No 42 of 1973.

With introducing the Economic liberalization policies of the Government in the 1980s, the Mahaweli Authority Act of 1979 was enacted and concurrently, the 'Accelerated Mahaweli Programme' was implemented. It opened up new lands for new farmers and landless people. In 1981, The Land Development (Amendment) Act was passed and it permitted the mortgaging of land, but the sale of land required the permission of the Government Agent. This grant called 'Swarnabhumi' and later it was changed to 'Jayabhumi'. The Agrarian Services Act was amended in 1991 to establish farmer organizations with the aim of giving more authority to the farmers. Even today, new laws and policies have been introduced, and many of the previous ones also still being operated.

5.4. Irrigation policy

Irrigation contributes significantly to the economy, by way of rice and other food crop production, and has been largely instrumental in reaching self-sufficiency in rice and in meeting a substantial proportion of the demand for other food crops.

Additionally, credit and water supply, chemicals, export, fertilizer, marketing, retail and wholesale trade, storage and processing sectors included under the input and output servicing sectors are showing up-right and transverse significant linkage with the irrigation. Thus, the overall irrigation contribution is substantial in the economic processes (Abayawardana et el., 2006).

In Sri Lanka, most irrigation can be seen in drier areas, where the rainfall pattern requires water storage for successful irrigated cropping. Priority was given to schemes in the dry zone in implementing the policy of restoring abandoned irrigation systems. In addition, resettlements in Southern region is significantly driven by the land scarcity in the North and East dry zones. Further, the period runs from 1850 to 2000 is substantial in the expansion of irrigated areas in the dry zone up to the recurrent situation. At that time, a number of large schemes were restored with financial support by the government and Farmers.

There were both subsistence and export agricultural sectors in the Sri Lankan agricultural field during the period of regaining the independence (Shand, 2002). Simultaneously, after the attainment of independence government facilitated and enhanced the agricultural infrastructure with the aim of improving domestic agricultural sector. Hence the irrigation facilities were considerably developed relatively in a greater deal uder the government patronage than the institutional credit suppliers and, inputs and extension services. Similarly, rehabilitation and restoration of irrigation schemes and the launching of new schemes were fuelled through the investments which were intensified by the agricultural policy. Further, the policy showed the significance of reaching self-sufficiency targets, specially in foods including rice.

By 1955 considerable amount of irrigation schemes were launched and thereafter in 1957, the maiden large multipurpose project was initiated as the Gal Oya Scheme. This was followed by Mahaweli in the 1970s and it can be introduced as the largest multipurpose scheme. These multipurpose projects were implemented with the main aim of irrigation development and Hydropower generation also another objective of these projects.

Government launched the ever largest Mahaweli multipurpose irrigation project with the aim of expanding the irrigated lands up to 300 000 HA and facilitating energy supply by generating 800 MW of hydropower at the finishing of the particular project (Abayawardana et. el, 2006). A percentage of 80 out of the whole irrigated area in the dry zone including 637 000 HA is under the irrigation in the year 2017. When considering the cropping intensity, it recorded as 150% in major irrigation areas. In contrast, cropping intensity reported in the minor irrigated areas is about 100% and it shows the cultivation of one crop annually. Similarly, paddy harvest is ranging between 3 to 5 metric tons per hectare and the upper limit of the above mentioned crop yield is passed by the other crops (Abeygunawardana et al, 2006).

According to Abeygunawardana et al (2006), policies in the irrigation sector have categorized into the areas as Institutional Policies, Irrigation system management policies, Operation and Maintenance policies, Water allocation policy and Irrigation financing policies. At present several government agencies are involved in the irrigation sector in various ways, particularly in construction, operation and management of irrigation systems. The Irrigation Department, the Irrigation Management Division, the Mahaweli Authority and the Department of Agrarian Services are the main government agencies that are involved in the irrigation sector in Sri Lanka. These agencies involved with construction, operation and management related to the irrigation systems.

Although the minor irrigation schemes, the management responsibility is entire with the Farmers, the Major irrigation systems are jointly managed with the management responsibility given to the farmer below the distributary level.

Operation and Maintenance policies in minor schemes are the responsibility of the farmers while in major schemes the agency responsible for management is responsible for operations and maintenance above the distributary canal, while the farmers are responsible for operations and maintenance below this canal. Although farmer contribution in the form of labour is forthcoming, operations and maintenance activities are largely financed by the government.

However, currently there is no policy on water allocation from major watercourses or water bodies for various purposes. When considering the irrigation financing policy, financing of all new major irrigation development schemes is done by the government and it is responsible for it. In minor schemes, major proportion of finance being provided by the government or other agencies such as community organizations, NGOs or beneficiaries and the farmer makes a meaningful contribution in the form of labour.

6. Concluding Remarks

Policies and policy reforms related to the agriculture sector have had a tremendous effect on increasing total production and productivity, income of farming community, and food security status of the country. This review provided an overview of some policies toward the agriculture sector in Sri Lanka with a particular focus fertilizer subsidy policy, food price and production policy, land policy and irrigation policy.

The review showed that even though fertilizer subsidy policy has mainly aimed to increase the productivity of farming sector, particularly in the paddy sector, it has been recognised a series of economic, social and environmental implications of the policy in long-run. Specifically, there is a debate in academic literature that the policy has resulted for survival of economically inefficient farmers in the sector and thereby restricted the farmers to move to more productive and efficient sectors in the farming resulting to maintain stagnated farming economy. Some studies have questioned the impact of fertilizer subsidy on farm productivity and suggested to gradual withdrawal of the policy. Some studies viewed the policy as investment in the areas of resource poor, but highly contributed to food security status of the country. These facts indicated the mixed arguments – positive and negative – but in a view of agriculture development, the policy should be withdrawn as it constricts the reallocation of resources from economically inefficient sector to efficient sectors.

The review of food price and production policies of the country indicated the reduced direct and indirect interventions to inputs and output markets during the post liberalization era and it has largely allowed market to determine input and output prices and resource allocation. In this connection, the government attempts in curtailing food subsidy programs, removing government monopoly in importing foods, and revising import policies were viewed. In case of production, nationwide development projects have been implemented with multiple objectives and as a results, the country was able to reach its self-sufficiency level in terms of main food – rice – by 2005.

In case of land policy, the review overviewed the chronology of the policies since the ancient time and gaps or limitations of the policies. It was further noted that some policies have led for inefficient utilization of land. Outdated regulations and dysfunctions of institutions relating to land management were also viewed in the review. The review further revealed large scale irrigation development in the dry zone of the country with the aim of multiple objectives. It has largely contributed to develop the agriculture areas reducing the risk and uncertainty in farming.

The reviewed revealed that irrigation policy of the country has mainly focused the restoration of tanks for agriculture water supply at the early pre- and early stage of independent. The most of irrigation development have been undertaken in the dry zone of the country as a multipurpose projects - agricultural settlement schemes, food production, hydropower generation, etc. However, currently there is no policy on water allocation from major watercourses or water bodies for various purposes. When considering the irrigation financing policy, financing of all new major irrigation development schemes is done by the government and it is responsible for it. In minor schemes, major proportion of finance being provided by the government or other agencies such as community organizations, NGOs or beneficiaries and the farmers make a meaningful contribution in the form of labour.

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