



Review of Agriculture Support Policies in Latin America and the Caribbean

M. Gurria | Consultant IADB

R. Boyce | IADB

C. Paolo De Salvo | IADB

DOI: 10.1481/icasVII.2016.c17

PAPER

I. Executive Summary

This report reviews the agriculture support policies of 18 Latin American and Caribbean (LAC) countries, which together account for 92% of the region's agriculture value added. Although agricultural policies and programs in LAC are heterogeneous, there are clear trends and commonalities. The review measures agriculture support policies and programs using the OECD Producer Support Estimates methodology¹.

Collectively, during the last year when data was measured, the LAC countries covered in this review transferred an annual amount of US\$27.2 billion to farmers, and they spent an additional US\$ 5.8 billion on agriculture public goods and services (here called general support services or GSSE). LAC Countries (as other emerging economies) have gone from taxing their agriculture sector in the 1990s to providing net levels of support. On the other hand, the level of support from high-income (OECD²) countries has been reducing, therefore showing some convergence and the opportunity for the agriculture sector of LAC to compete in a more level playing field. 7% of the gross agricultural receipts (agriculture income) of an average farmer in the LAC countries covered under this review (2010–2014) came from agriculture support policies and programs. This is very low compared to 18% in OECD countries (2014). There has also been an important shift within LAC in moving from market price support (MPS) which distort market prices for agriculture products, to direct farmer support (through fiscal support). However, 37% of producer support still comes from MPS.

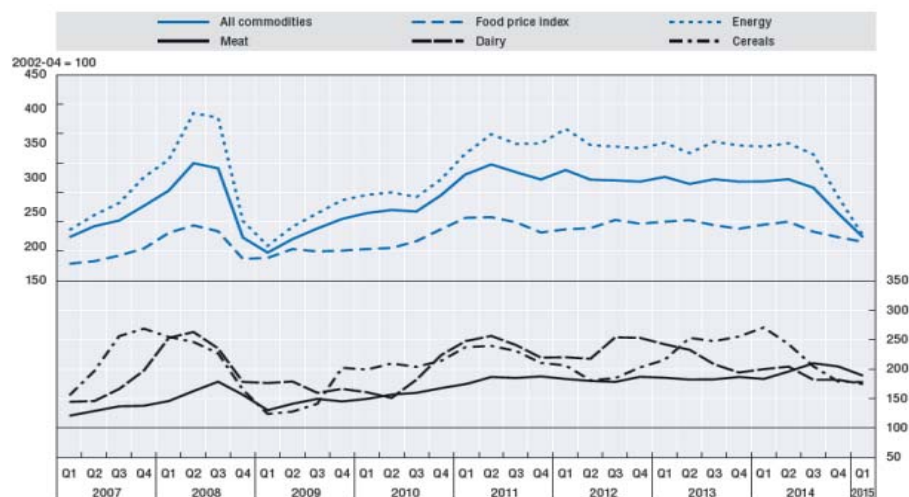
II. Economic and Agriculture Market Developments in LAC

Over the last two decades, LAC countries have shown positive trends for agriculture development, and in particular agricultural trade. Although trade in agricultural products has declined as a percentage of overall trade worldwide, its value has grown substantially. The LAC region has captured an increasing share of this growing market and currently holds a much larger portion of world trade in agriculture (13 percent, up from about 8 percent in the mid-1990s) than in minerals and metals (8 percent) and manufactured goods (3 percent). Agriculture and food now represent about 23 percent of the region's exports and 10 percent of global trade. Over the period 1995–2009, export growth averaged 8 percent a year. Temperate products (cereals, oilseeds, and livestock products) accounted for more than half of this growth. Seafood, fruits and vegetables contributed around 15 percent, followed by processed products like beverages and tobacco. Of course, this pattern varies by sub-region, with, for example, fruits and vegetables being the dominant contributor in Mexico and the Andean region. Almost all LAC countries contributed to the export growth, but Brazil made the largest contribution by far (more than 35 percent), followed by the Southern Cone (around 30 percent). Except Colombia, the region's largest exporters have all increased their global market shares. Among the second tier of exporters, Peru, Ecuador, Paraguay, and Uruguay have also increased their market share. Central American and Caribbean countries, except Costa Rica and Guatemala, have maintained or lost their market shares. Though the EU and the United States remain LAC's most important destinations—accounting for a combined 45 percent of LAC's exports in 2009, down from 57 percent in 1995—developing countries are becoming the most dynamic destination for the region's exports (UN COMTRADE Data). Over 1995–2009, China and the rest of the world, with a combined 30 percent of the market share, contributed 36 percent of the growth of exports from the region, nearly the 38 percent contribution of the EU (20 percent) and the United States (18 percent).

¹ See: www.oecd.org

² Please note that there is one country in LAC, Mexico, which is part of the OECD, and therefore is counted in both groups..

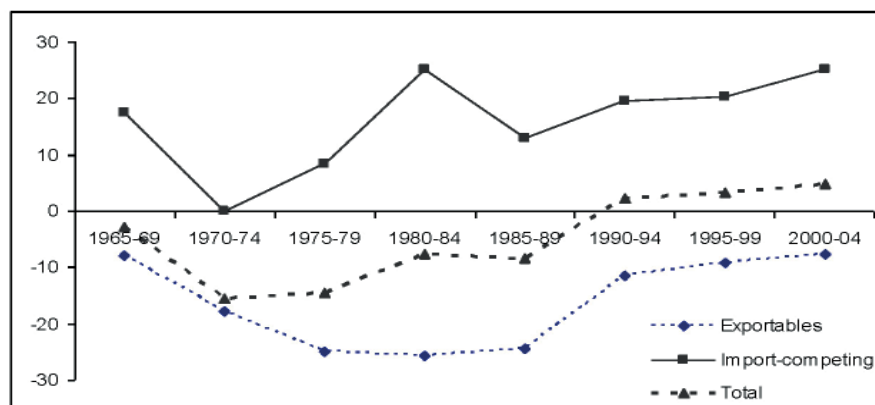
Graph 1 - Commodity world price indices, 2007-2014



Source: OECD (2015). Agriculture Policy Monitoring and Evaluation 2015. Highlights.

Also, while developed economies imported primarily fruits, animal fodder, coffee, beverages, and seafood from LAC, products from the soybean complex (seeds, oil, and cake), meat, and sugar represented almost 60 percent of the trade with developing economies. However, commodity prices declined broadly in 2014 (see Graph 1) and this has put some downward pressure on sector profits and government revenues from the sector. In their own agriculture trade policies, LAC countries have made great strides since the 1960s and 1970s, when highly protectionist trade policies and exchange rate regimes promoted industry-led development. This created in LAC and most other developing countries a strong anti-export and anti-agriculture incentive structure. Relative rates of assistance show the protection of manufacturing compared with that of agriculture, with negative values indicating an anti-agricultural bias (Graph 2). In LAC, the overall incentive structure has been close to neutral since the early 1990s. By contrast, some developing regions (including Africa) still maintain a net taxation of agriculture, while others have moved to the agricultural subsidization model of the high-income countries. This does not imply, however, that there is no need for further reform in LAC. The overall neutral structure masks a greater protection of import substitutes than of exportables, creating an anti-export bias for agricultural production. Nonetheless, this difference has greatly diminished since the 1980s, indicating that this anti-export bias has lessened, and one of the latest important changes has been the elimination of almost all agriculture export taxes by Argentina at the end of 2015.

Graph 2 - Nominal Rate of Assistance (NRA) of agrifood products from LAC



Source: Anderson and Valdez (2008).

III. Main agriculture policies and programs in LAC

Agriculture policies and programs of LAC countries are diverse and change quickly in several countries. While many countries have a mix of policy measures and programs, policy designs differ between countries. The landscape of agricultural policies can be characterized by five different approaches:

1. **Market Price Support (MPS), through border measures:** Those policy instruments prevail in terms of Producer Support Estimates (PSE) in Uruguay, Peru, Suriname, all 5 Central American countries³, Jamaica, Ecuador and Colombia.

³ Includes Nicaragua, El Salvador, Honduras, Costa Rica and Guatemala. Excludes Panama and Belize.

2. **Reducing costs of purchased inputs and capital:** Subsidies to farm-purchased variable inputs, such as energy and fertilizers have recently become more important in Brazil, Chile and Mexico. Concessional credit schemes to stimulate agricultural investments are cornerstone policies in Brazil and Colombia.
3. **Emphasis on policies that mitigate the downside risks to revenue and income:** This has recently been reinforced in Peru, Brazil and Mexico.
4. **Emphasis on extension services to farmers:** Recent increase in provision of extension services to farmers were observed in Chile, Peru, Paraguay and Uruguay.
5. **Emphasis on enabling business environment for agriculture:** Countries that focus their policy instruments on general services with a public good character include Chile, Peru, and Uruguay.

The specific dualistic nature of the sector leads to a twin-pillar policy approach. One set of policies addressing the competitive commercial segment, and another set addressing a struggling small-scale segment. Brazil and Chile explicitly differentiate their policies between those segments and typically provide support to small farmers through a variety of measures that reduce costs of capital and other purchased inputs and facilitate better market integration.

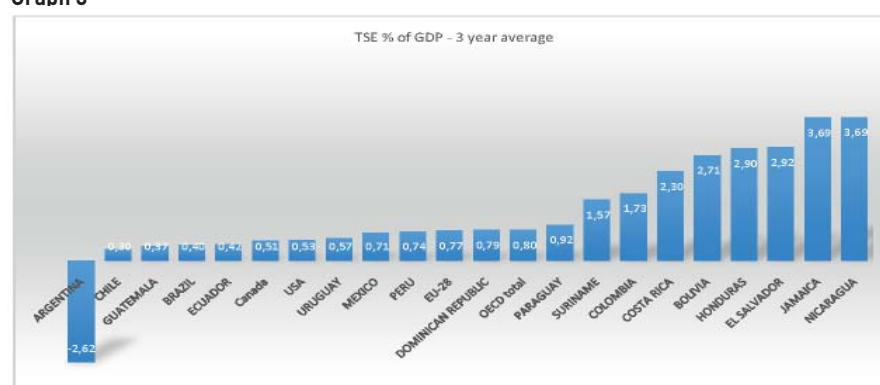
Several countries make efforts in agricultural innovation systems to improve productivity and sustainability in the long term. Much of those efforts occur outside the field of more narrowly defined agricultural policies, which would typically cover expenditures on extension and farm advisory services, and are embedded in national innovation strategies. Finally, with agriculture contributing directly and indirectly about a quarter of global greenhouse gas (GHG) emissions, climate change mitigation is increasingly on the agricultural policy agenda. With a few exceptions (like Brazil and Uruguay⁴), actual policy efforts are relatively limited, however.

IV. Review of agriculture support estimates

Here we present the estimates of agriculture support policies and programs for LAC to assess the type of supports, the composition of supports, and its evolution over the past few years. The 18 LAC countries reviewed are the ones with data on agriculture support estimates published in the IDB Agrimonitor database⁵. However, it is important to note that for practical purposes, in some of the graphs and analysis undertaken in this section, Argentina was left out as it is an outlier in LAC, showing large negative support estimates (total and producer support estimates) due to the export taxes in place until 2015. Also, when looking at the average of OECD countries, note that Mexico is part of the OECD data. This section begins with assessing the Total Agriculture Support Estimates (TSE), its composition and its evolution. It then reviews the Producer Support Estimates (PSE), its composition, and evolution. Finally, the section focuses on Consumer Support Estimates (CSE) and General Support Services Estimates (GSSE) or agriculture public goods and services. Total Support Estimate (TSE), expressed as a percentage of GDP, illustrates the weight that countries assign to agriculture support policies. The TSE combines transfers to agricultural producers individually (measured by the Producer Support Estimate, the PSE), policy expenditures that have primary agriculture as the main beneficiary, but that do not go to individual farmers (measured by the General Services Support Estimate, the GSSE) and budgetary support to consumers of agricultural commodities (the Consumer Support Estimate, CSE, net of the market price element that is already accounted for in the PSE).

a) Total Support Estimates (TSE) and its composition (as percentage of Ag GDP and GDP)

Graph 3



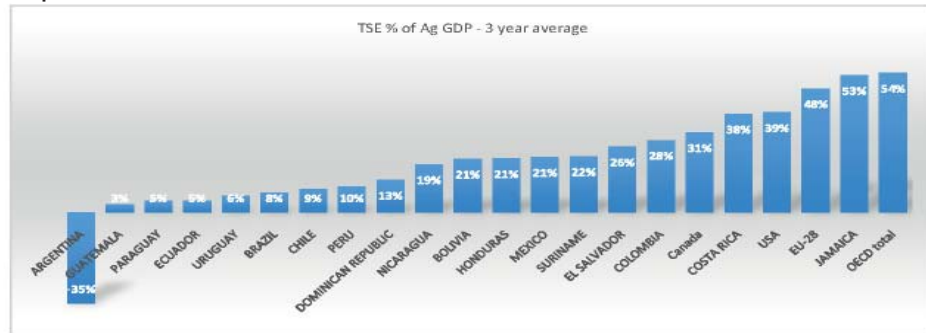
(* Note: The 3-year average takes the last 3 years when data is available on agriculture support estimates (see Agrimonitor database: <http://www.iadb.org/en/topics/agriculture/agrimonitor/agrimonitor-pse-agricultural-policy-monitoring-system,8025.html>). These 3-year averages can go from 2007 to 2014.

⁴ Brazil has a large climate smart agriculture (CSA) policy, promoting CSA technology adoption (Programa Agricultura de Baixo Carbono – ABC. See: <http://www.agricultura.gov.br/desenvolvimento-sustentavel/plano-abc>). Uruguay also has a major public policy on climate change adaptation (see: <http://www.mgap.gub.uy/portal/page.aspx?2,MGAP,mgap-desarrollo-y-adaptacion-al-cambio-climatico,O,es,0,>).

⁵ See: <http://www.iadb.org/en/topics/agriculture/agrimonitor/agrimonitor-pse-agricultural-policy-monitoring-system,8025.html>

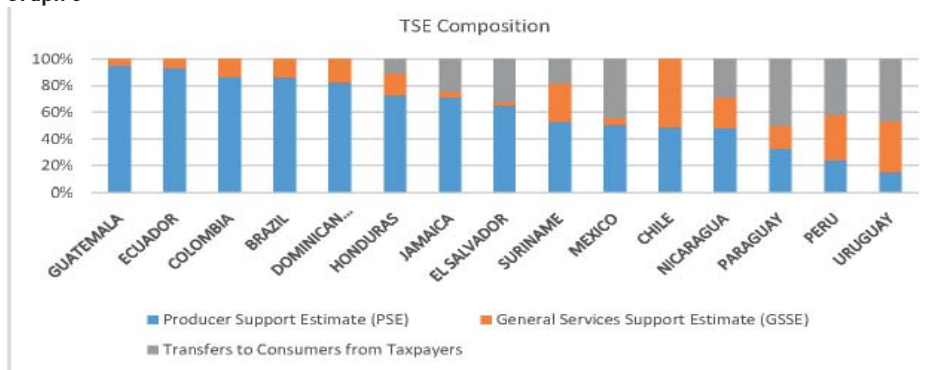
Graph 4 below shows that, with the exception of Jamaica, LAC countries provide a lower level of agriculture support (measured as TSE as % of their Agriculture GDP), than OECD, USA, and EU countries. We observe that countries in the southern cone (Argentina, Paraguay, Uruguay, Brazil, Chile and Peru) tend to have lower TSE% (less than 10%) than the rest of the LAC region. However, when comparing the TSE to overall GDP (see Graph 3 above), we observe that the TSE% is lower for OECD, USA, and EU countries than several LAC countries. This reflects the fact that agriculture represents a lower share of the total GDP of high-income countries, and therefore, although the TSE is high relative to the sector, it is low relative to the economy as a whole. On the other hand, several countries in LAC, in particular in the 5 Central American countries, have an agriculture sector that is more important in relation to the overall economy, so the size of supports to its agriculture will be larger in relation to its overall GDP than in high-income economies where agriculture represents a smaller share.

Graph 4

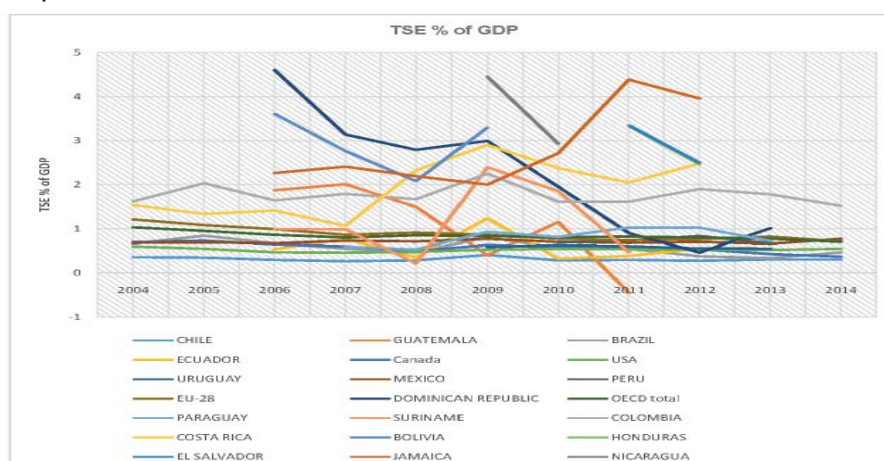


The composition of TSE (see Graph 3 below) shows that support to the producer support (PSE) is the main type of agriculture policy in LAC, with the exception of Paraguay and Uruguay, where transfers from consumers to taxpayer and general support services (GSSE) are more important respectively. Also, the evolution of TSE as % of total GDP (see Graph 5 below) shows that with the exception of Jamaica and Costa Rica, TSE has been decreasing, as it happened in higher income countries. While in 2004 more than half of LAC countries' TSE was above 1% of GDP, by 2013-2014, most were under 1%. Finally, the evolution of the composition of TSE (see Graph 6 below) shows that although PSE is still the main type of agriculture policy in LAC, it has been decreasing in importance in several countries. Chile, Colombia, Dominican Republic, Honduras, Paraguay, Peru and Uruguay have seen its PSE (as % of TSE) be reduced in importance while GSSE and increase. On the other hand, Brazil, Ecuador, Jamaica, Argentina, Guatemala and Mexico has seen its PSE increase (as % of TSE).

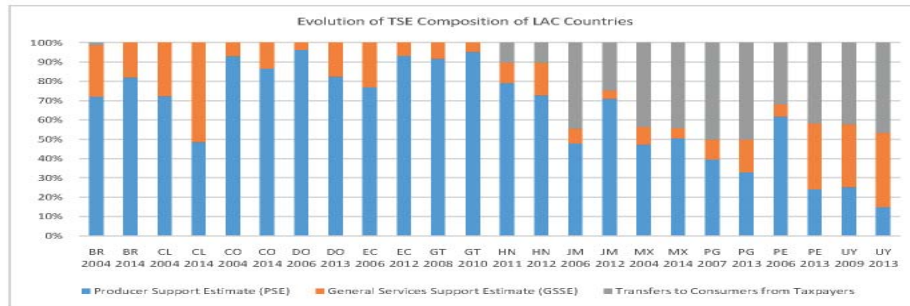
Graph 5



Graph 6

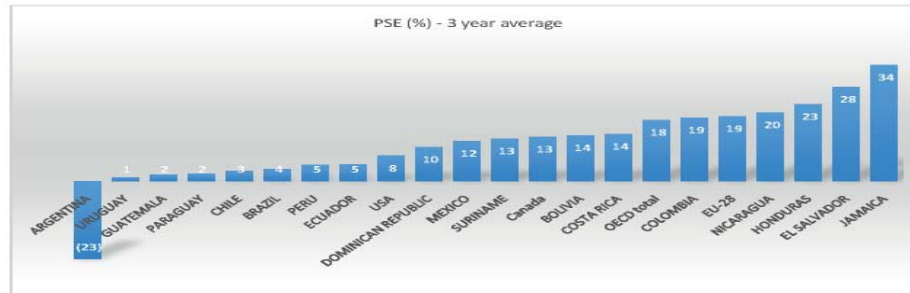


Graph 7



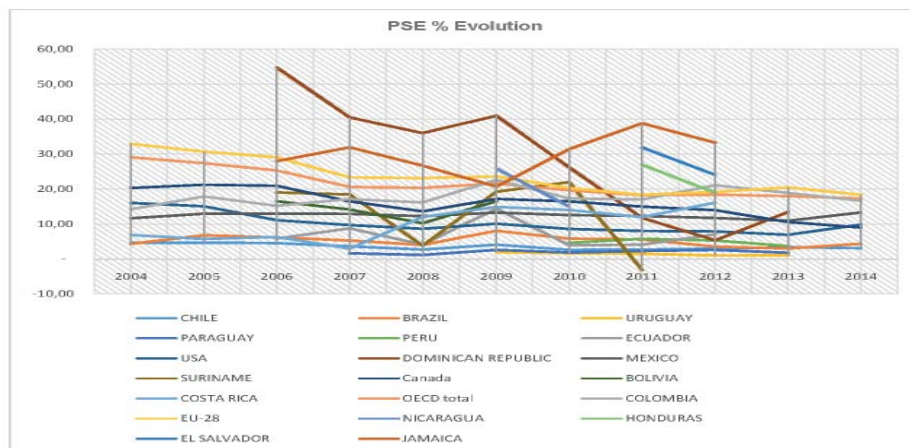
b) Producer Support Estimate (PSE) and its evolution (as percentage of gross farm receipts)

Graph 8



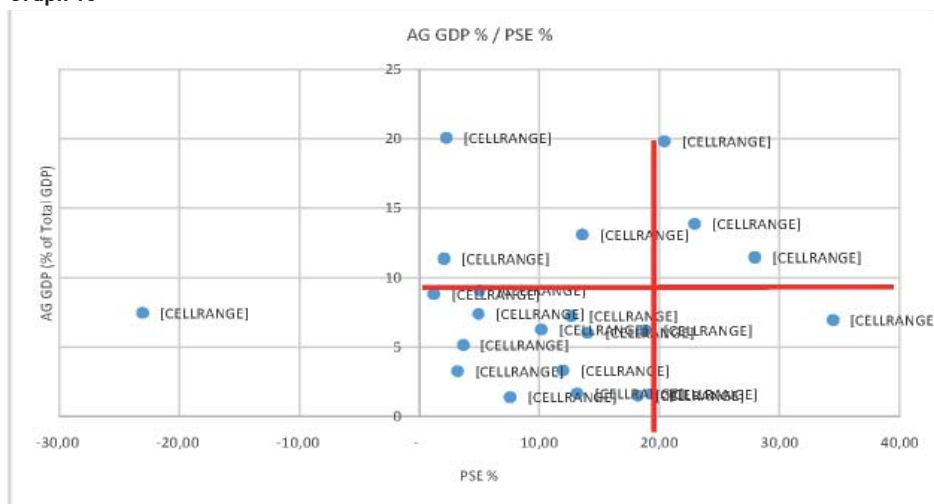
In terms of Producer Support Estimate as a percentage of gross farm receipts (PSE%), we observe again (see Graph 8 above) how Southern Cone countries have lower levels of support than the other LAC countries (with the exception of Guatemala who scores lower than Paraguay, Chile and Brazil). It is important to note the group of LAC countries with levels at or above the OECD / EU (PSE% above 18%): Colombia, Nicaragua, Honduras, El Salvador and Jamaica. This Graph 6 show important differences in terms of PSE% between LAC countries, even neighboring ones. For example, 2% of the farm income of an average farmer in Guatemala comes from agriculture support policies and programs, while for an average farmer in neighboring El Salvador it is 28% (more than a quarter of farm income). The evolution of the PSE% over time (see Graph 9 below) shows that there has been a decline in PSE%, with the exception again of Jamaica and Costa Rica, which have seen their PSE% increase. In 2004, several LAC countries showed PSE% above 20%, while by 2014, all countries with data were under the 20% mark.

Graph 9



c) Correlations between PSE level for each country and other variables (like GDP/capita, rural/urban population, agriculture GDP)

Graph 10

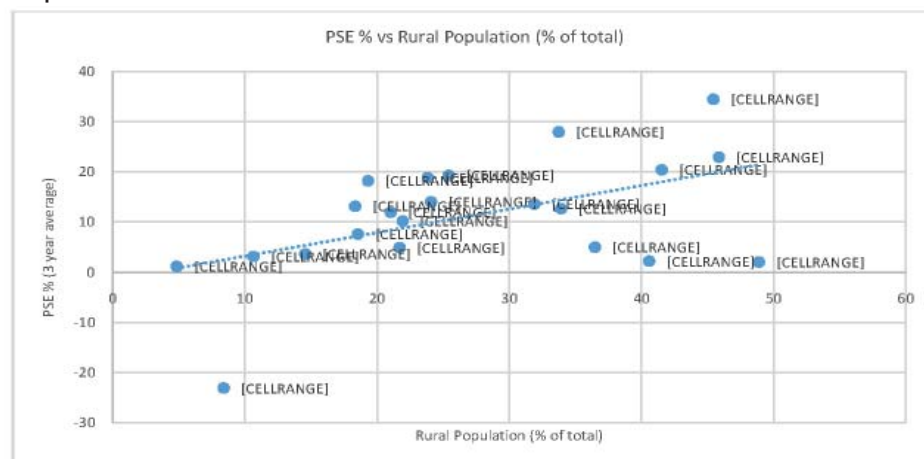


When comparing the weight of the agriculture GDP in the total GDP with the PSE% (see Graph 10 above), it is clear that most countries with an agriculture sector that represents less than 10% of its total GDP have PSE% of less than 20%. This means that less than 20% of farm income of the average farmer in most countries in LAC (as well as OECD, Canada and the US), comes from agriculture support policies and programs. However, countries like Guatemala, Paraguay and Bolivia, also show relatively low levels of PSE% (less than 20%), but their agriculture sector represents more than 10% of their total GDP. For these countries where agriculture is a large portion of the country's total GDP, the challenge is how to support their agriculture sector without burdening taxpayers (as the fiscal resources needed would need to be large as percentage of the country's total public budget).

Another group is Nicaragua, Honduras and El Salvador; countries that have agriculture sectors that represent an important size of their economy (more than 10% of total GDP), but with relatively high levels of PSE%. For these countries, both fiscally, but also for consumers, supporting the agriculture sector is a relatively large burden. Improving agriculture public expenditures and ensuring that farmers improve their competitiveness by reforming agriculture policies and programs towards non-distortive approaches should be at the center of the agriculture policy dialogue of these countries. Finally, Jamaica, a country with an agriculture sector that represents less than 10% of its GDP, but with the highest PSE% of LAC, shows that the economy and its taxpayers and consumers are heavily supporting its farmers, and that this may be afforded as its agriculture sector is relatively small compared to other LAC countries.

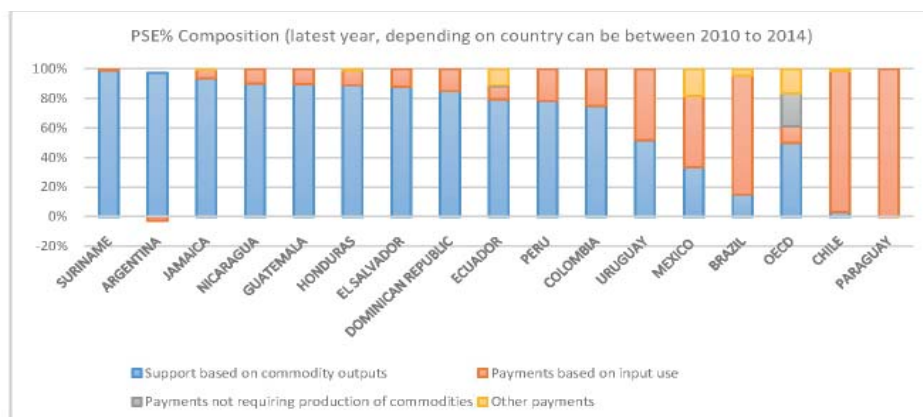
Therefore, although Graph 10 shows no clear correlation between agriculture GDP (as % total GDP) and PSE%, there are groupings of countries that emerge. A group in the lower left hand quadrant of the Graph 10, where most countries are, with low levels of agriculture GDP (as % of total GDP) and low levels of PSE%. Then there are three smaller groups (with three countries or less, each). One small group (composed of Guatemala, Paraguay and Bolivia) with a high importance of agriculture GDP in their economies, but with low levels of PSE%; another small group (composed of Nicaragua, Honduras and El Salvador), with high levels of PSE% and an important role of the agriculture sector in total GDP; and the third one composed only of Jamaica with high levels of PSE% but a relative small agriculture sector in relation to total GDP.

Graph 11



When looking at PSE% in relation to the importance of the rural population (as % of total population), we observe a correlation (see Graph 11 above). The countries with relatively larger rural populations have higher levels of PSE%. This could be due to the importance that these countries place on supporting the rural population, as agriculture incomes tend to be the single most important source of income for rural households in LAC. The higher levels of PSE% in Central American and Caribbean countries could be driven by the weight that the rural population places on prioritizing agricultural public policies and programs. However, there are some exceptions (outliers) to this correlation, specifically, Guatemala and Paraguay, which have a relatively large rural population but low levels of PSE%.

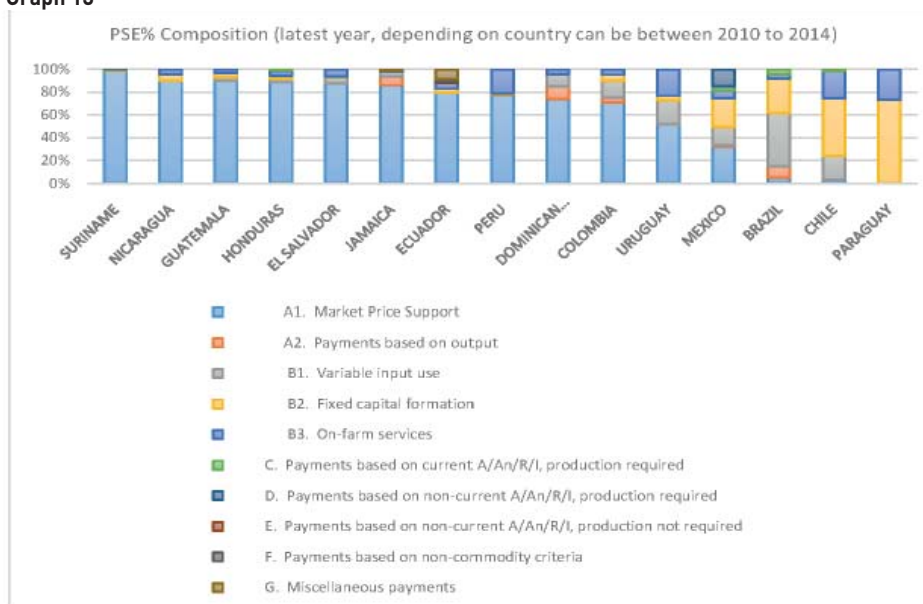
Graph 12



d) Composition of fiscal support of PSEs per country (as percentage of PSE)

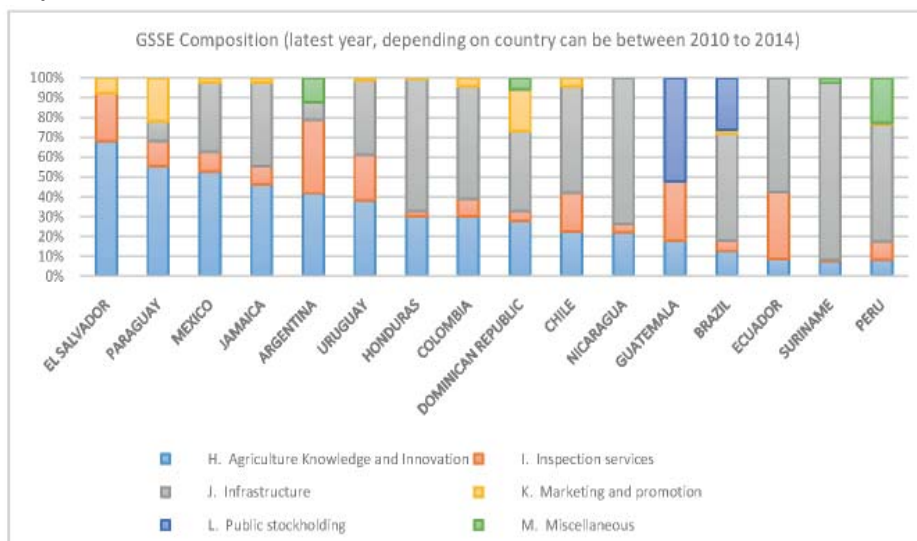
Graph 12 above shows the composition of PSE for LAC countries and the OECD. There is a clear heterogeneity in the composition of PSEs in the region. While OECD countries show a more balanced mix of supports, LAC countries rely heavily on supports based on commodity outputs, and in some countries like Chile, Brazil, and Paraguay, on payments based on inputs. A closer (more disaggregated) view of these PSE compositions (see Graph 13 below) reveal that the larger part of the support based on commodity outputs is derived from Market Price Support (MPS), which represents transfers from consumers to farmers through higher domestic prices due to tariff and non-tariff barriers. MPS does not require public expenditures, while the other types of supports do. In countries such as Chile, Brazil and Paraguay, with very little or no MPS, we observe that the supports are mainly focused on on-farm services (extension) and fixed-capital formation (asset creation), while in Brazil and Chile, supports based on variable inputs are also important.

Graph 13



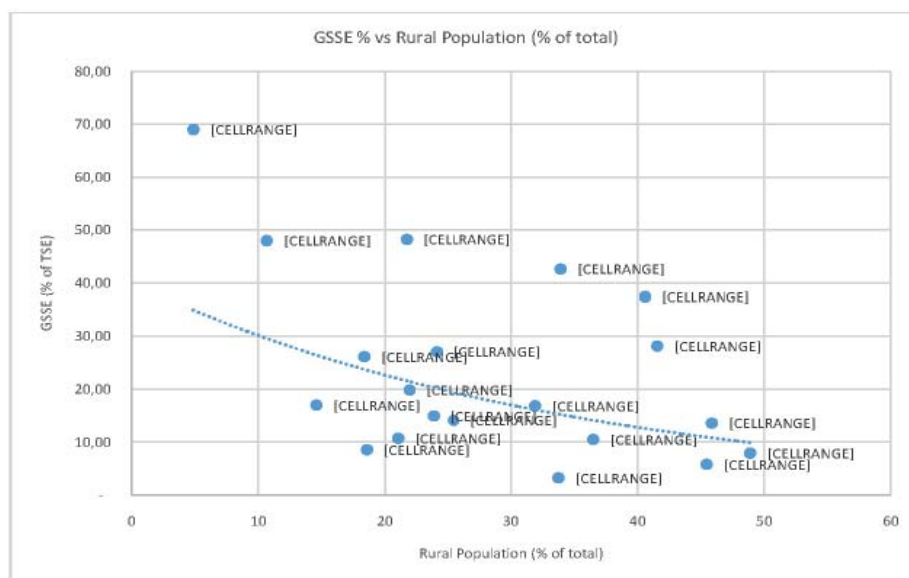
e) Composition of GSSE per country (as percentage of GSSE, US\$ and percentage of Ag. GDP).

Graph 14



The composition of General Support Services (or agriculture public goods and services) is also heterogeneous across LAC (see Graph 14). Regardless of the level of GSSE, some LAC countries like Argentina, Uruguay, El Salvador, Jamaica and Paraguay spend a larger portion of GSSE resources on agriculture knowledge and innovation compared to OECD countries. Suriname, Peru, Honduras, Nicaragua, Ecuador, Colombia, Chile and Brazil spend more on infrastructure development and maintenance compared to OECD countries. Finally, only Paraguay and the Dominican Republic spend more than the OECD in marketing and promotion. Public stockholding is virtually non-existing in most LAC countries, but it is a key GSSE category for Brazil and Guatemala.

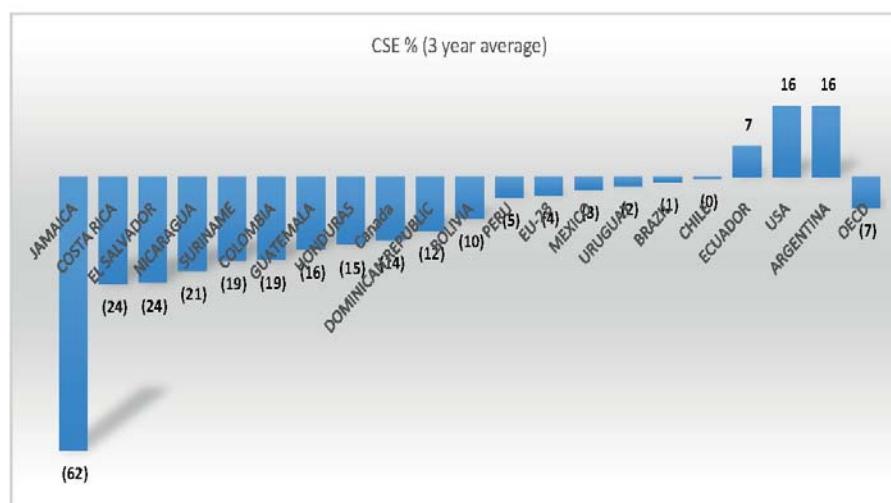
Graph 15



Contrary to the correlation between PSE% and the importance of rural population (Graph 14), Graph 15 shows that GSSE (as % of TSE) is negatively correlated with the share of the rural population in the entire population. This means that in countries where the rural population is larger (as % of total population) GSSE investments decrease in importance as a percentage of TSE. This could be reflecting a tendency for agriculture public policy to move towards direct farmer supports (PSE) in order to provide income support to low income farmers, while reducing the allocation towards GSSE. The incidence of poverty (and in particular extreme poverty) is higher in rural areas, and in countries with large rural populations, targeting agriculture as income support could be an effective way of helping reduce rural poverty.

Consumer support estimates as percentage of overall food consumption expenditures (CSE%) show that most countries (including Canada, EU, and OECD) have negative CSE (see Graph 16), meaning that consumers pay a higher price domestically than they would pay in the absence of agriculture policies and programs. Ecuador and USA have positive CSE% given that these countries provide support to consumers for food consumption (i.e. in the USA, the main program is foods stamps). Argentina has positive CSE% due to the high export taxes on agriculture products, which dampens the domestic food prices (until 2015).

Graph 16



f) Consumer Support Estimate (CSE) per country (as percentage of expenditure at farm gate)

V. Conclusions and proposed future agenda for agriculture policy reform

Collectively, the LAC countries covered in this report (excluding Argentina) transferred annually an average of USD 26.3 billion to agricultural producers in the years 2012-14 (compared to USD 601 billion of the OECD countries) and they spent an additional USD 5.5 billion (compared to USD 135 billion of the OECD countries) on general services that support the functioning of the sector. Those transfers are burdening consumers and taxpayers, and reforms could improve the effectiveness and efficiency of policies.

However, in LAC as a whole (with the exception of Costa Rica and Jamaica), gradual progress has been made in reducing the level of support to farmers and in introducing less distorting forms of support. The level of support was reduced and the share of production and trade distorting support fell. Those changes occurred to different degrees and at different speeds, with slow changes particularly in the group of countries that rely heavily on instruments that support prices

and production. The GSSE tends to focus on agriculture knowledge and innovation and infrastructure, with less resources going to inspection and promotion and marketing. At the same time, the large use of instruments such as market price support and input subsidies in countries like Peru, Ecuador and the 5 Central America is worrying as this increases distortions on domestic and international markets and is a rather cost-ineffective way to provide assistance.

Given the competitive position of LAC in food production and trade, it is important to think about reducing vulnerability to shocks and adapting to climate change, in order to maintain a constant and reliable food supply both domestically and abroad. OECD countries, including USA and EU, are already reforming their agriculture support structures to become more competitive in the global agricultural arena. There needs to be an increase in investment in agriculture public goods and services in order to improve the capacity of the agricultural sector of LAC to respond to those challenges and to realize its full economic potential. This also reinforces the need to improve the wider policy environment in which the sector operates so as to attract financial and human resources and to foster an innovative agricultural sector that responds to societies' needs.

Such a broader re-orientation of policy approaches require a clear vision of the end-point of policy reforms at national and international levels. In the short term, an agriculture public policy dialogue needs to be undertaken in LAC countries in the following areas:

- **Prioritize investments in agriculture public goods and services:** There is a need in LAC to move away from farm income support to invest in knowledge, education and strategic infrastructure that can help improve the long-term productivity, sustainability, and profitability of the sector. This has shown to reap larger economic returns than direct income support to farmers.

- **Within agriculture public goods and services, invest in agriculture knowledge and innovation:** There is a need to strengthen the governance of innovation in agriculture to improve the strategic orientation on long-term issues. Several LAC countries invest less in agriculture knowledge and innovation than OECD countries.

If direct farmer support is needed, it is important to engage in a policy dialogue in the following areas:

- **Market price support should be reduced**, replacing it with non- distortive direct supports and/or agriculture public goods and services. LAC consumers pay the bill of MPS, especially low-income households. However, fiscal space must be available to do that, and therefore external financing could support this transition. It also delinks farmers from market signals and has been shown to be highly distortive for production and trade.
- **Input subsidies** are inefficient in assisting farmers as they increase the risk of over- or misuse of farm inputs such as fertilizers which can be environmentally harmful. Concessional credit schemes can pose a big burden to government budgets, as it is the case in Brazil. Variable input support has also been shown to be particularly production and trade distortive. Transforming from such subsidies to decoupled subsidies (as was done in Mexico and Paraguay) would need to be on the agenda in the short term.
- **Direct payments**, as was done with the PROCAMPO in Mexico, may be an efficient means in specific policy areas such as to achieve environmental benefits and supporting farm incomes. However, they need to be linked to clear objectives and targets, and well-tailored to the problem at hand. Direct payments can play an important transitory role in the process of reforming agricultural policies in LAC.