The Political Economy of Global Agriculture: Effects on Agriculture, Farmers, Consumers and Economic Growth

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Abstract

International political economy deals with mutual interaction of international politics and international economics. The ever-changing political scenarios, be it right-wing or left-wing, agriculture in particular has been neglected. The main focus of the paper is to study the effects of political economy on agriculture, farmers, consumer welfare and economic growth. The data on indicators collected from FAO, World Bank, IMF, UNDES, WEF, OECD, CGIAR reports. The growth rates, Agricultural Orientation Index (AOI) and statistical-analysis estimated. Globally, political and economic systems, international governments like World Bank, IMF and WTO's attitude towards agriculture is poor. Agriculture must be brought on global political agenda for sustainable food security, economic growth and development and to achieve Millennium Development Goals (MDG's). The protection of producers and consumers is being based on political will of governments. The study concludes for developing countries, stimulus package is required for the development of agriculture. The political economy of AOI indicates that the countries which have more than 1 will spend more budget in budget allocation towards agriculture. The study found that, clearly agriculture globally is not on the priority list for the local central governments in allocating their budgets towards agriculture. The study suggests that, economic minded politicians and political minded economists who has knowledge of social, political and economic systems are required in efficient economic system of agriculture.

Keywords: Global agriculture, Political economy, International institutions, Farmers, Consumers

Introduction:

International politicians tend to neglect economic dimensions while dealing with international relationships and international economists tend to neglect political dimensions in dealing with international economy. Benefit-cost analysis is a tool devised by economists. Economists think in terms of opportunity costs and incentives; lawyers think in terms of rules and penalties and of defeating their adversary (Schultze, 1977; Rhoads, 1985). Politicians determine the optimal policy by maximizing their own utility which is of political contribution called growth or social welfare and votes. They also focus on political economics of fiscal policy, macro economy and the role of constitution. The role of government in agriculture in agricultural marketplace each year is in each step from the farm to the market, there is a framework of national, state, and local government policies. Government may influence what a farmer grows, where a farm is located, how products are transported and processed, how a commodity is traded, and the price the farmer might receive (Iowa Public Television, 2017).

International political economy studies problems that arise from or are affected by the interaction of international politics, international economics, and different social systems (e.g., capitalism and socialism) and societal groups (e.g., farmers at the local level, immigrants in a region, the poor who exist transnationally in all countries) (Encyclopedia Britanica, 2017). Models need to incorporate sufficiently complex interactions between ideology, economic structure, and protection to understand better how this web of interactions affects agricultural and food policies. Consider, for example, food policies of the most extreme left-wing regimes. Communist dictators such as Stalin in Russia, Mao in China, and Hoxha in Albania all heavily taxed agriculture, while farmers were subsidized under the Communist regimes of Brezhnev in the Soviet Union and in most East European Communist countries in the 1970s and 1980s (Johan F.M. Swinnen, 2010).

The political institution variables require further improvement. For example, Swinnen, Banerjee, and de Gorter (2001) find how some of the changes in voting rules in Belgium had effects on agricultural protection, while others had no effect. In particular, those changes in electoral rules which disproportionately benefited people involved in agriculture (such as extending voting rights to small farmers and tenants in the early twentieth century) induced an increase in agricultural protection, while electoral changes (such as extending voting rights to women) did not affect agricultural protection. Rather, they increased voting rights both of those in favor of and of those against protection.

An area where substantial improvements could be made is in analyzing the impact of international organizations and international trade agreements on agricultural policy distortions. While this issue has received considerable

attention over the past decade, for example, the URAA effects, the establishment of the WTO, NAFTA, EU enlargement, etc., there has been little econometric work on this issue. It seems to agree that while the URAA may have constrained the growth of agricultural protection, it has done little to reduce it, at least in the countries that were members of the General Agreement on Tariffs and Trade (GATT) during the trade negotiations (Anania et al. 2004). Bagwell and Staiger (2002) and Dutt and Mitra (2007) derive hypotheses that countries with a comparative advantage in agriculture who join the WTO will exhibit a larger fall in agricultural protection levels.

Many (agricultural) political econometric models effectively focus on producers (farmers), consumers and taxpayers. Some recent models have tried to include politicians' preferences by including an "ideology" variable. However, this needs to be improved in order to correctly measure influences. Similarly, the role of other bureaucratic organizations, such as the European Commission, is mostly not captured, although they may play an important role (Prendergast,2007). Political entrepreneurs may also play a role in organizing interest groups and making their preferences more influential. For example, politicians played a key role in organizing farmers in rural Europe in the late nineteenth and early twentieth centuries as they tried to set up farm organizations that were closely associated with certain political parties. More recently, some (politically "savvy") African leaders have been using (rural) interests either to ensure their political survival, such as Mugabe in Zimbabwe, or their rise to power, such as in the post-Mao political struggle in China when the reformers around Deng Xiaoping took over control of the Communist Party, aided by the success of the property rights reforms (Rozelle and Swinnen 2009).

The financial (institutional/political) crises affecting the global setting, for example, the financial crises in Latin America in the 1980s and in Asia in the 1990s, the liberalization reforms after the political changes in the Soviet Union in the 1990s, and the structural adjustment programs in Africa in the 1980/90s. With regard to political institutions, while the importance of political systems for policy, and thus agricultural policy distortions, has long been emphasized, for example as in the seminal work by Buchanan and Tullock (1962), the past decade and a half has witnessed a growing set of studies that analyze the impact of political regimes and ideology on policy-making. Persson and Tabellini (2002; 2003) analyzed the relationship between electoral systems and economic policy. To relate some of these more general insights to agricultural policy-making, consider the political regime, the "constitutional choice," in the framework of providing the degree of "insulation" afforded to policy-makers (Aghion, Alesina and Trebbi 2004).

Several empirical studies do find an impact of political institutions on trade and agricultural policy. For example, Banerji and Ghanem (1997) and

Milner and Kubota (2005) find that authoritarian regimes do have higher trade protection and greater labor market distortions. In a related approach, Masters and McMillan (2000) and McMillan (2001) find that governments that have a lower discount rate (that is, those that are less likely to lose power in the future, which presumably includes more autocratic regimes) are less likely to tax agricultural exports in Africa. Olper and Raimondi (2009) find that, within democratic regimes, agriculture is significantly more protected under proportional electoral rule than under majoritarian. However, they do not find a difference between presidential and parliamentary electoral systems ideology. An interesting approach to disentangling some of the problems regarding the interactions between political institutions and preferences of autocratic rules is proposed by Dutt and Mitra (2005). These authors focus on the impact of ideology and allow the ideology variable to interact with an indicator of the structure of the economy, that is, its resource endowment, as well as an indicator for political liberties, to measure the conditional impact of ideology. Interestingly, they find that the more left-wing a government is, that is, it attaches higher weight to the welfare of workers/labor, the more protectionist it is in the case of capital-abundant countries, but the less protectionist it is in the case of capital-scare countries.

Swinnen (forthcoming 2009), who finds that right-wing governments in Europe, such as those dominated by Catholic parties and conservative parties, as well as the Nazi party in Germany (1933–1945), have tended to support farm interests and increase protection. Swinnen and Anderson (2010) gives, a review of the most dramatic changes in agricultural policy distortions that have occurred in recent decades reveals that these have been triggered by "external changes." For example, it is well known that budgetary problems played an important role in stimulating agricultural policy liberalization in Sweden and New Zealand in the 1980s. Similarly, regime changes in China, Eastern Europe and the former Soviet Union triggered important changes in their agricultural policies. In fact, one could even argue that the objective of these governments was not to change agricultural policy per se, but that overall changes implied a change in agricultural policy as well. Blanchard and Willmann (2007) show, with a dynamic political economy model, that in a democracy there may be two steady states: one protectionist and one liberal.

Global agriculture needs a 'profound transformation' to fight climate change and protect food security, hunger, poverty. In response to this challenge, the New Vision for Agriculture calls for a new approach. The new approach is global leaders have aligned around the New Vision for Agriculture. Regional and national leaders have adopted the vision as their own, catalysing action-oriented partnerships in Asia, Africa and Latin America. (Dastagiri, 2017). Agriculture in the 21st century has multiple challenges. In the recent political international developments, globally,

agriculture seems is back on the development agenda, seen as a key to spurring growth and reducing poverty, and as a key route to meeting the Millennium Development Goals (FAO, 2012). Experts and the public alike seem to alternate between pessimism and optimism, anxiety and complacency, about the world food situation and outlook. For the past few decades, the rate of growth in world food production in both developed and developing countries has exceeded the population growth rate. During the 1970s and 1980s the food situation improved tremendously (Mrityunjay and Singh, 2008). But by the 1980s and 1990s the increasing scarcity of land and water resources, environmental degradation, and loss of biodiversity had begun to limit the expansion of food production in both developed and developing countries (Dastagiri, 1998).

World Watch Institute (2004) reports that increases in food production, per hectare of land, have not kept pace with increases in population, and the planet has virtually no more arable land or fresh water to spare. FAO (2011) emphasizes agricultural investment is essential to promoting agricultural growth, reducing poverty and hunger, and promoting environmental sustainability. Reports on global food security in 2011 by the IFPRI (2011) and other reports of the FAO (2012), the World Bank (2011), and the International Fund for Agricultural Development (2011) all highlighted the need for governments to ensure responsible investment in agriculture. Global food security – or, in more traditional terminology, world hunger– remains a serious concern (Valentin, 2011). However, even at the global level, current food supplies are sufficient to nourish the world population (Valentin, 2011). Food insecurity, therefore, results from uneven distribution. In the coming decades, calorific production is projected to further outpace population growth (Valentin, 2011). Global food crises are turning out to be far too frequent to be dismissed any longer as a freakish phenomenon. A spike in the prices of agricultural commodities is again looming, threatening a repetition of the 2007-2008 global food crisis when international prices skyrocketed to their highest in 30 years (Caliber, 2012).

The International Monetary Fund (IMF)'s food price index rose by over 80 per cent between the start of 2007 and mid-2008 (Subramaniam, 2012). Severe drought in the United States, flooding in several parts of Europe, a massive shortfall of rain in Africa and India are feared to lead to huge loss of output and a scramble for markets and supplies (Subramaniam, 2012). As in many other parts of the world, soaring food prices during the period 2007/08 had major impacts on the countries of Southeast Asia. It is hardly surprising that the use of cost-benefit analysis, quantitative risk assessment, and similar analytic tools generates substantial political controversy in the United States. The risks, costs, and benefits under scrutiny are usually difficult to estimate with precision. (Calabresi and Bobbitt, 1978).

Human beings in general and elected officials in particular find it difficult to admit that the policies they support leave some innocent people at risk, especially when that risk is potentially lethal (R. Shep Melnick)

Most regulatory agencies are internally diverse, numbering economists and political executives, as well as lawyers, engineers, and scientists, among their staffs. Political executives must take responsibility for the consequences of agency decisions—economic as well as environmental. Agency economists spend a good deal of their time estimating the economic consequences of regulatory decisions and responding to arguments put forth by economists outside the agency.

In the face of climate change, global political and food insecurity, and volatility of global market prices and the resurgence of health crises, only an ambitious, continent –wide policy can safeguard each country's independence. The main focus of the paper is devoted to explaining the incentives and strategies of politicians, economists, agency officials, and environmental advocates. How this web of interactions affects agricultural and food policies, farmers, consumers, welfare and economic growth?

The specific objectives of the study are:

1. To study the effects, benefits and costs of political economy of countries in budget allocation in sectors.
2. To analyse the political economy of countries in preferences of agriculture and other sectors.
3. To analyse the political economy of the impact of international organizations (WTO, WB, IMF) and international trade agreements on agriculture.
4. To analyse the political economy motives behind preferring farmer and consumer welfare.
5. To suggest policies and strategies to adopt the successful political economy of agriculture in the globe.

Data and Methodology

The study is basically based on political economy of global agriculture and quantitative frame work. The effects of global political economy of agriculture in general and continents & country-wise in particular from 37 to 170 major countries of 6 continents policies and insights were analyzed. The developed countries of continents viz., European union (15 countries), North America (3 countries viz., USA, Mexico and Canada), Asia (11 countries including china), South America (4 countries), Africa (2 country), and Australia were purposefully selected to analyze the effects of international political economy on global agriculture, trade, farmer and consumers, policy distortions, welfare and economic growth.

The data and information on global economic systems, key economic indicators, share of sectors, GDP, World Bank lending sector wise, global agricultural domestic support during WTO regime, producer and consumer support and policies collected from FAO, World Bank, IMF, UNDES, WEF, OECD, CGIAR reports and published secondary sources and websites. The secondary data related to Producer Support Estimates and Consumer Support Estimates were collected from OECD Agriculture statistics (database)and growth rates were estimated. Continent-wide policy can safeguard each country's independence. The continent wise policies are critically appraised and compared with one another and best policies are arrived. The study used Delphi survey method to validate the results obtained through secondary data (Dalkey and Helmer, 1963). It also suggests the best future global agricultural policies. The meta analysis, growth rates and agricultural orientation index were estimated.

Growth rate formulae: (Damodar N. Gujarati and Sangeetha, 2007)

The compound growth rate (r) will be calculated by fitting

Exponential function to the variables of interest viz., allocation of funds, Producer Support Estimates and Consumer Support Estimates for the period 1995 to 2018.

Yt - Y0 (1+r)t ---------1

Assuming multiplicative error term in the equation1, model may be linearized by logarithmic transformation

lnYt = A+ Bt +€ ----------2

Where, A (=lnAo) and B (=ln (1+r)) are the parameters to be estimated by ordinary least square regression, t= time trend in year, r = exp (B) -1

Agricultural Orientation Index Formula:

$$AOI = \frac{Agriculture\ share\ of\ Total\ Outlays\ (central\ govt)}{Agriculture\ share\ of\ GDP}$$

Results and Discussion

Type of political economic systems:

The list of countries and their type of economy shown in the table 1. It was found that most of the developed countries are capitalistic and developing countries are socialistic. Only few countries which are communist countries includes China, North Korea, Cuba, Laos and Vietnam. Majority of the countries in the world are mixed economies in operation. These type of economies play an important role in resource allocation and protection of agriculture.

Table1. List of countries with their type of Economy:

Sl.no	Type of Economy	Countries
1	Capitalism	New Zealand, Switzerland, Australia, Canada, United Arab Emirate, Taiwan, United Kingdom, the Netherlands, the United States, Denmark, Sweden, South Korea, Thailand, Japan, Mexico, Germany, Spain, Greece, Belgium, Italy, France, Austria, South Africa and Norway.
2	Socialism	India.
3	Communism	China, North Korea, Cuba, Laos and Vietnam.
4	Nigeria, Indonesia, Iran, Saudi Arabia, Turkey, Russia, Poland, Colombia, Argentina, Venezuela, Brazil.	Refer Appendix I

Economic indicators of major countries of world

The key economic indicators of major countries of world are shown in Table 2. The moving average of real world GDP percentage decreasing from 3.3 in 2014 to 2.9 in 2016. The European countries and Japan show an increasing trend, however, the United States, the OECD and Non-OECD countries, Indonesia and Russia display a mixed trend in the real GDP percentage over the years 2014, 2015 and 2016. In synchronous with the world trend, the countries such as Brazil, China, Colombia and South Africa show a decreasing trend. Unemployment rate and World Trade growth rate over the years are decreasing, where as inflation displays a mixed trend. The developed countries real GDP (%) display either an increasing or a mixed trend and developing countries show a decreasing trend. The decreasing trend of developing countries real GDP (%) will not enable them to allocate more on agriculture.

Table 2. Key economic indicators of major countries of world

OECD area, unless noted otherwise

	Average 2004-2013	2014	2015	2016
		Per cent		
Real GDP growth[1]				
World[2]	3.9	3.3	3.1	2.9
OECD[2]	1.6	1.9	2.1	1.7
United States	1.6	2.4	2.6	1.5
Euro area	0.8	1.2	1.5	1.7
Japan	0.8	0.0	0.6	0.8
Non-OECD[2]	6.6	4.6	3.8	4.0
Brazil	4.0	0.1	-3.9	-3.4
China	10.3	7.3	6.9	6.7
Colombia	4.8	4.4	3.1	2.1
Indonesia	5.7	5.0	4.8	5.0
Russia	4.1	0.7	-3.7	-0.8
South Africa	3.3	1.6	1.3	0.4
Output gap[3]	-0.5	-2.1	-1.5	-1.4
Unemployment rate[4]	7.1	7.4	6.8	6.3
Inflation[5]	2.0	1.6	0.7	1.0
World real trade growth	5.3	3.9	2.6	1.9

1. Year-on-year increase; last three columns show the increase over a year earlier.
2. Moving nominal GDP weights, using purchasing power parities.
3. Per cent of potential GDP.
4. Per cent of labour force.
5. Private consumption deflator. Year-on-year increase; last 3 columns show the increase over a year earlier.

Source: OECD (2016), OECD Economic Outlook, Vol. 2016/2, OECD Publishing, Paris. Last updated November 2016.

Comparison of Nominal GDP's of countries in the World

The Country groups by nominal GDP in the world shown in table 3. All the 7 major advanced economies of G7 have at least 0.5% of Global GDP. Among the other 32 advanced economies excluding G7, countries such Australia, Austria, Belgium, South Korea, Netherlands, Norway, Spain, Switzerland, Sweden and Taiwan have at least 0.5% of Global GDP. In case of 30 Emerging and Developing Asian economies, only 4 countries (China, India, Indonesia and Thailand) have at least 0.5% of Global GDP. In the 32 Latin American and the Caribbean Countries only Argentina, Brazil and Mexico have at least 0.5% of Global GDP. Among the Middle Eastern countries, North Africa, Afghanistan and Pakistan, the UAE, Saudi Arabia and Iran are major economies with at least 0.5% of Global GDP. In 12 emerging and developing European countries, Poland and Turkey and in 12 Commonwealth of Independent States and Georgia, Russia have at least 0.5% of Global GDP. And in 45 Sub-Saharan African Countries only Nigeria has at least 0.5% of Global GDP. It shows that Africa is the highest backward continent in the world. Those countries which have less than 0.5% of Global GDP has a disadvantage in budget allocation to agriculture.

Table 3. Country groups by GDP (nominal) in the World in Millions US$ as on April 2017

Country Group	GDP (Nominal)	Peak Year	Number of Countries	Economies with at least 0.5% of Global GDP
Major advanced economies (G7)	3,60,06,539	2017	7	Canada, France, Germany, Italy, Japan, United Kingdom, United States
Emerging and Developing Asia	1,70,84,823	2017	30	China, India, Indonesia, Thailand
Other Advanced Economies (Advanced economies excluding G7)	1,15,93,086	2014	32	Australia, Austria, Belgium, South Korea, Netherlands, Norway, Spain, Sweden, Switzerland, Taiwan
Latin America and the Caribbean	59,83,936	2013	32	Argentina, Brazil, Mexico
Middle East, North Africa, Afghanistan, and Pakistan	34,73,402	2014	22	Iran, Saudi Arabia, United Arab Emirates

Commonwealth of Independent States and Georgia	29,43,338	2013	12	Russia
Emerging and developing Europe	20,31,117	2014	12	Poland, Turkey
Sub-Saharan Africa	16,90,338	2014	45	Nigeria
World	7,85,19,556	2014	192	

Source: International Monetary Fund, World Economic Outlook Database, April 2017

The share of sectors in total GDP of countries

The share of sectors in total GDP of countries and population continent wise is presented in Table 4. The below 36 countries are the major economies of the world in GDP contribution. In agriculture sector, Nigeria has the maximum (17.8%) share of GDP among the world countries despite 2.5% share of world population. It is followed by India, which has 17.2 % share of GDP to the agriculture sector with 17.7% of the World Populace. The industry share of GDP is maximum in the Saudi Arabia at 69.1%, followed by the UAE (53.9%), Indonesia (47.2%), China (46.8%) and others. The services share of GDP is highest in the USA (79.6%), followed by France (79.4%), Greece (78.9%) and others. The high income economies, as classified by the World Bank such as Japan, Taiwan, Australia, Germany, Netherlands, Switzerland, Spain, Italy, Sweden, Belgium, Poland, United Kingdom, France, Austria, Norway, Denmark, Greece, the USA and Canada have more than 50% share of service sector in total GDP of the respective countries. And the economies of the US and France have almost service sector share of nearly 80%. Saudi Arabia and the UAE despite being high- income countries show a low service sector share (28.9%, 45.3% respectively) and high industry sector share (69.1%, 53.9% respectively), which could be probably attributed to the Oil and petroleum industries. The UK (0.7%), Belgium (0.7%), Germany (0.8%) and the UAE (0.8%) have the least share of agriculture sector contribution to their GDP's among the major world economies. China with its highest populace in the world seems to balance between its industry (46.8%) and service (43.1%) sectors contribution to their economic GDP.

The agriculture shares in GDP for the developing countries, as per the IMF, such as Nigeria, China, India, Indonesia, Iran, Thailand and Argentina have more than 10%. Whereas, South Africa, Russia, Turkey, Mexico, Colombia, Venezuela and Brazil have less than 10% share of agriculture in its GDP, despite being developing countries. While, in the case of South Africa (2.5%), it is the low availability of arable land contributing to the lowest share of agriculture in its GDP. Rapid urbanization in Colombia during the 20th century has reflected a drop in the agriculture sectors share with increase in industry and services share in GDP. The study found that high dependence on agriculture is observed in most of the developing countries and the high

income economies are focusing more on (>50%) service sector. Saudi Arabia and the UAE has high industry sector share (>50%) which is due to their exploration of oil and petroleum reserves. The more dependence on agriculture will allow the politicians to exploit in the elections.

Table 4. The share of sectors in total GDP of countries and population Continent wise

No.	Country/Economy	Agriculture	Industry	Services	Population	% Share in world population
–	World	6.1	31.1	62.9	7,46,69,64,280	
	AFRICA					
1	Nigeria	17.8	25.7	54.6	18,59,89,640	2.5
2	South Africa	2.5	31.6	65.9	5,60,15,473	0.8
	ASIA					
1	China	10.1	46.8	43.1	1,40,35,00,365	18.8
2	Japan	1.2	27.3	71.6	12,77,48,513	1.7
3	India	17.2	26.4	56.4	1,32,41,71,354	17.7
4	Indonesia	14.7	47.2	38.1	26,11,15,456	3.5
5	United Arab Emirates	0.8	53.9	45.3	92,69,612	0.1
6	Iran	10.4	37.7	51.8	8,02,77,428	1.1
7	Saudi Arabia	2	69.1	28.9	3,22,75,687	0.4
8	South Korea	2.6	39.2	58.2	5,07,91,919	0.7
9	Thailand	13.3	34	52.7	6,88,63,514	0.9
10	Taiwan	1.3	32	66.9	2,35,56,706	0.3
11	Turkey	9.3	28.1	62.6	7,95,12,426	1.1
	AUSTRALASIAN					
1	Australia	3.6	28.2	68.2	2,41,25,848	0.3
	EUROPE					
1	Germany	0.8	28.6	70.6	8,19,14,672	1.1
2	Netherlands	2.7	24.2	73.1	1,69,87,330	0.2
3	Russia	4.5	36.9	58.6	14,39,64,513	1.9
4	Switzerland	1.3	27.5	71.3	84,01,739	0.1
5	Spain	3.2	25.8	71	4,63,47,576	0.6
6	Italy	2	24.7	73.4	5,94,29,938	0.8
7	Sweden	1.8	27.3	70.9	98,37,533	0.1
8	Belgium	0.7	21.7	77.6	1,13,58,379	0.2
9	Poland	3.4	33.6	63	3,82,24,410	0.5
10	United Kingdom	0.7	21.4	77.8	6,57,88,574	0.9
11	France	1.8	18.8	79.4	6,47,20,690	0.9
12	Austria	1.5	29.4	69.1	87,12,137	0.1
13	Norway	2.6	39.7	57.7	52,54,694	0.1
14	Denmark	4.5	19.1	76.4	57,11,870	0.1
15	Greece	3.3	17.9	78.9	1,11,83,716	0.1
	NORTH AMERICA					
1	United States	1.2	19.2	79.6	32,21,79,605	4.3
2	Canada	1.9	27.1	71	3,62,89,822	0.5
3	Mexico	3.8	34.2	62	12,75,40,423	1.7
	SOUTH AMERICA					
1	Colombia	7	37.6	55.5	4,86,53,419	0.7
2	Argentina	11.4	30.2	58.4	4,38,47,430	0.6
3	Venezuela	3.8	35.8	60.4	3,15,68,179	0.4
4	Brazil	5.5	27.5	67	20,76,52,865	2.8

Source: Population - United Nations Department of Economic and Social Affairs, Population Division, Population Estimates and Projections Section. June 2017

The nominal GDP and agriculture orientation index of the countries:

Any country's budget allocation determines the political economy of sectors. The nominal GDP of the major 36 countries, the total outlays of the central governments and the agriculture orientation index is given in Table 5. As per the FAO, The Agriculture Orientation Index (AOI) for government expenditures is defined as the Agriculture Share of Government Expenditures, divided by the Agriculture Share of GDP, where agriculture refers to the agriculture, forestry, fishing and hunting sector. Agriculture Orientation Index indicates political cost and political benefits. An Agriculture Orientation Index (AOI) greater than 1 reflects a higher orientation towards the agriculture sector, which receives a higher share of government spending relative to its contribution to economic value-added. An AOI less than 1 reflects a lower orientation to agriculture, while an AOI equal to 1 reflects neutrality in a government's orientation to the agriculture sector.

The political economy of AOI indicates that the countries which have more than 1 will spend more budget in budget allocation towards agriculture. The study found that, clearly agriculture globally is not on the priority list for the local central governments in allocating their budgets towards agriculture, except for South Korea and Switzerland, whose agriculture orientation index is greater than 1(1.96 and 5.08 respectively).

Table 5. Nominal GDP sector composition 2015 (in percentage and in millions of dollars)

№	Country/Economy	Nominal GDP (in Million $)	Agri. Share in GDP (%)	Total outlays 2015 (Central Government) (in Million $)	Agriculture orientation index
–	World	7,52,12,696	5.90%		
	AFRICA				
1	Nigeria	4,15,080	17.80%		
2	South Africa	3,41,216	2.50%	60254.34	0.68845
	ASIA				
1	China	1,12,18,281	6.90%	410151.69	0.31944
2	Japan	47,30,300	1.20%	760577.81	
3	India	22,50,990	17.40%		0.000769
4	Indonesia	9,40,953	14.30%	134821.07	
5	United Arab Emirates	4,16,444	0.70%	17506.14	0.05023
6	Iran	4,12,340	11.20%		
7	Saudi Arabia	6,57,785	2%		
8	South Korea	14,04,380	2.70%	297256.6	1.96439
9	Thailand	3,90,592	13.30%	75187.49	0.83418
10	Taiwan	5,19,149	1.30%		
11	Turkey	7,55,716	8.90%	277290.12	0.39941
	AUSTRALASIAN				
1	Australia	12,56,640	4%	326570.64	0.23684
	EUROPE				
1	Germany	34,94,900	0.80%	425433.58	
2	Netherlands	7,69,930	2.80%	310458.85	0.22548
3	Russia	12,67,750	3.90%	451002.73	0.17643

4	Switzerland	6,62,483	1.30%	117416.31	5.08178
5	Spain	12,52,160	3.30%	418114.85	0.08045
6	Italy	18,52,500	2%	537402.74	0.16724
7	Sweden	5,17,440	1.80%	147381.2	0.38457
8	Belgium	4,70,179	0.70%	125407.29	0.00004
9	Poland	4,67,350	3.40%	188586.55	0.38103
10	United Kingdom	26,49,890	0.70%	1124398.57	0.45754
11	France	24,88,280	1.90%	1115984.03	0.2045
12	Austria	3,87,299	1.50%	177453.82	
13	Norway	3,76,268	2.70%	150895.81	0.93762
14	Denmark	3,47,196	4.50%	124401.99	0.39976
15	Greece	2,46,397	3.30%	105728.45	0.11949
	NORTH AMERICA				
1	United States	1,79,46,996	1.12%	2405200	
2	Canada	15,32,340	1.80%		
3	Mexico	10,63,610	3.70%		
	SOUTH AMERICA				
1	Colombia	4,00,117	8.90%	66126.09	
2	Argentina	5,41,784	10%	165216.11	0.09439
3	Venezuela	2,09,226	4.70%		
4	Brazil	17,69,600	5.40%	496545.66	0.14801

Sources: The World Bank _ Agri. Share % GDP
Share of different sectors - "The World Fact book - Central Intelligence Agency". Central Intelligence Agency. September 2017.
Total Outlays, Agriculture Orientation Index _ FAO STAT

Political Economy of International Financial Institutions

The World Bank Group is one of the world's largest sources of funding and knowledge for developing countries, consisting of five institutions with a common commitment to reducing poverty, increasing shared prosperity, and promoting sustainable development. The World Bank Group consists, International Bank for Reconstruction and Development (IBRD), International Development Association (IDA), International Finance Corporation (IFC), Multilateral Investment Guarantee Agency (MIGA) and International Centre for the Settlement of Investment Disputes (ICSID). The institutions IBRD and IDA play a major role in the agriculture sector in middle-income and creditworthy low-income countries of the world.

World Bank lending by sector wise for the fiscal years 2011 – 2015 is given in Table 6. World Bank lending has been the highest to Public administration, law and justice sector in all the years and the least to information and communications. Agriculture, Fishing and Forestry has been given low to medium preference among various sectors by the major lending institutions of the world. Political economy of international financial institutions displays high priority to Public administration, law and justice sectors and a poor treatment towards the agriculture sector

Table 6. World Bank lending sector wise: fiscal 2011–15 (Millions of dollars)

SECTOR	*FY11*	*FY12*	*FY13*	*FY14*	*FY15*
Agriculture, Fishing and Forestry	2,128	3,134	2,112	3,059	3,027
Education	1,733	2,959	2,731	3,457	3,534
Energy and Mining	5,807	5,000	3,280	6,689	4,510
Finance	897	1,764	2,055	1,984	4,054
Health and Other Social Services	6,707	4,190	4,363	3,353	6,647
Industry and Trade	2,167	1,352	1,432	1,807	2,311
Information and Communications	640	158	228	381	322
Public Administration, Law and Justice	9,673	8,728	7,991	8,837	8,180
Transportation	8,683	4,445	5,135	6,946	5,151
Water, Sanitation, and Flood Protection	4,617	3,605	2,220	4,332	4,760
Sector Total	43,006	35,335	31,547	40,843	42,495
Of which IBRD	26,737	20,582	15,249	18,604	23,528
Of which IDA	16,269	14,753	16,298	22,239	18,966

Note: Numbers may not add to totals because of rounding

Source: World Bank Annual Report 2015

The active portfolio net commitments for the major regions of the world given in Table 7 for the year 2015. IDA being a developmental agency working for the poorest countries offers maximum support to African regions, followed by South Asia and others. IBRD focuses more on the low and middle income countries with its major support in Latin American and the Caribbean, Europe and Central Asia, East Asia and Pacific. The study observed that Middle East and North African Countries are funded extremely low in comparison to other regions of the world by IDA and IBRD. This could be due to the political instability and terrorism, which hinders the growth of the regions.

Table 7. Active portfolio net commitments (Billions of dollars, as of June 30, 2015)

REGION	*IBRD*	*IDA*	*TOTAL*
Africa	5.1	46.9	52.0
East Asia and Pacific	22.6	9.0	31.6
Europe and Central Asia	23.8	2.4	26.2
Latin America and the Caribbean	25.0	2.0	27.0
Middle East and North Africa	10.6	1.1	11.7
South Asia	15.4	28.0	43.5
Total	102.5	89.5	191.9

Source: World Bank Annual Report 2015

The allocation of funds to various countries by the World Banks for the years 2014-2018 is given in Table 8. The growth rates from 2014 to 2018 have been calculated accordingly. The growth rates for the countries China, Indonesia and Colombia are positive at 14.44%, 16.08% and 24.54% respectively. The negative growth rates are observed for Nigeria (-9.26%), India (-23.22%), Mexico (-4.02%) and Brazil (-66.89%). There is a sudden

surge of funds in 2015 to Argentina and the growth rate since 2014 is 829.33%. The first democratic elections in Argentina at the end of 2015 led to a significant change in the economic policies of the country coupled with the new administrations speedy implementations of the core reforms. The study observed the sudden increase of funds to Argentina and decreased funding for the countries Nigeria, India, Mexico and Brazil.

Table 8. Allocation of Funds to various countries by the World Banks for the year 2014-18

№	Country/Economy	2014	2015	2016	2017	2018	Growth rate from 2014-2018 (%)
	AFRICA						
1	Nigeria	2022.6	1475	1075	1511		-9.26
2	South Africa				93		
	ASIA						
1	China	1648.2	1855.6	1994.5	2470.1	402.7	14.44
2	Japan	-					
3	India	5109.4	3820.1	3844.5	2312.5	844.1	-23.22
4	Indonesia	1085.5	1000	1700	1697.8	300	16.08
5	United Arab Emirates, Iran, Saudi Arabia, South Korea, Thailand, Taiwan, Turkey	-					
	AUSTRALASIAN (All countries)	-					
	EUROPE (All countries)	-					
	NORTH AMERICA						
1	United States, Canada	-					
2	Mexico	395.9	866.9	500	350		-4.02
	SOUTH AMERICA						
1	Colombia	873.3	1410.4	1400	1686.7	512	24.54
2	Argentina	1.9	1343.1	1000	1525		829.33
3	Venezuela	-					
4	Brazil	2019.7	568.2	758	73.3	50	-66.89

Source: World Bank Open Data

Political Economy of International Trade Institutions

Of late, globally, during WTO regime international political economy play greater role in agriculture protection and policy distortions. The international trade in the hands of politicians in terms of duties, QR's and export import subsidies, policy economists play minimum role in these areas. Trade lobby often government choice of policy. Political organization schemes influence lobby. Larger firm better lobbying power.

Political Institutions: WTO

The numerical targets for agriculture during the Uruguay Round are given in Table 9. The average cut for all agricultural products for the developed countries up to 6 years is at -36% and for developing countries it is given at -24% up to 10 years. Whereas, the Total Aggregate Measure Support cut for agriculture is kept at -20% for the developed countries up to 6 years and for developing countries it is given at -13% up to 10 years. These targets

are not followed in many WTO member countries which have comparative advantage.

Table 9: Numerical targets for agriculture During Uruguay Round

Target Variables	Developed Countries 6 years: 1995 to 2000	Developing Countries 10 years:1995 to 2004
Tariffs		
Average cut for all agricultural products	-36 %	-24 %
Minimum cut per products	-15 %	-10 %
Domestic Support		
Total AMS cut for sector (base period:1986-88)	-20 %	-13 %
Exports		
Value of Subsidies	-36 %	-24 %
Subsidized quantities (base period 1986-90)	-21 %	-14 %

Source: Agriculture: fairer markets for farmers, WTO Website, Accessed on 5th September, 2017

Global Agricultural Domestic Support

Agricultural support is defined as the annual monetary value of gross transfers to agriculture from consumers and taxpayers arising from government policies that support agriculture, regardless of their objectives and economic impacts (OECD, 2017). The compound annual growth rates of global agricultural supports (2000-2016) were presents in Table 10. During 2000-2016, the highest and positive growth rates in agricultural support were observed in Russia (22.68 %) followed by India (20.19 %), China (19.93 %), New Zealand (12.34 %), Philippines (6.41 %), Costa Rica (6.36 %) and Brazil (6.01). During the same period, the negative growth rates in agricultural support were observed in Mexico (-3.44 %), Chile (-2.59 %), USA (-2.47 %), Japan (-1.52 %) and OECD (-0.37 %) members. The study found that during the period 2000 to 2016, Russia, India, China and New Zealand are given more domestic support and Mexico, Chile, USA, Japan and OECD countries were given decreasing support to agricultural sector than compared to other WTO member countries.

Table 10: CAGR of Agricultural Domestic Support of Major Countries (2000-01 to 2015-16)

Country	2001-01 (Million US $)	2015-16 (Million US $)	Growth Rates (%)
AFRICA			
Nigeria	-	-	-
South Africa	-	-	-
ASIA			
Japan	54087.760289	41666.362575	-1.52
Philippines	2178.844683	6263.9232717	6.41
India	1711.1651614	35969.07528	20.97
Turkey	9035.9132087	17182.470971	3.85
China	9653.5109856	212182.44246	19.93

New Zealand	19.710724668	142.44130871	12.34
Russia	369.39297734	11927.501871	22.68
Korea	19259.316117	20039.270887	0.23
Israel	786.231704	1361.0379525	3.28
AUSTRALASIAN			
Australia	780.04101778	890.21761192	0.78
EUROPE			
Norway	2153.0054632	3128.3623498	2.22
Switzerland	5481.17354	7288.1231953	1.69
Ice land	153.46424787	222.30802092	2.20
European Union (28 Countries)	87824.861824	99735.092058	0.75
NORTH AMERICA			
Mexico	7604.6223222	4194.500000	-3.44
Canada	4335.3820311	4777.1896215	0.57
United States of America	50880.500624	33277.271943	-2.47
Costa Rica	187.62505661	535.52379232	6.36
SOUTH AMERICA			
Chile	562.3029226	359.9737062	-2.59
Brazil	2727.5682198	7362.2856907	6.01
Colombia	2342.3570188	3297.0799012	2.03
OECD Member Countries	242964.28604	228052.49612	-0.37

Source: OECD Data, Accessed on 29 September, 2017

Government Protection of Farmer and Consumer

The Producer and Consumer support estimates, their percentages, Nominal Protection Coefficients, Nominal Assistance Coefficients of the various countries, continent wise are given in the Table 11. The growth rates have been calculated from 1995-97 to 2014-16. South Africa being a capitalistic democracy protects neither the producer nor the consumer. However, the producer support estimates growth rate is higher than the consumer support estimates growth rate in South Africa. In case of capitalistic Australasian countries, the welfare state New Zealand under monarchy supports both the producers and the consumers with PSE growth rates of 4.34% and CSE growth rates of 6.53%. Australia being a constitutional monarchy supports the producers over the consumers with growth rates of -1.87% for PSE and -100% for CSE. Among the Asian countries Korea, China, Indonesia and Vietnam support the consumers over the producers. Whereas, Kazakhstan, Turkey, Israel and Japan supports the producers over the consumers. In the European nations, Iceland, Norway and Russia support the consumers over the producers in contrast to the Switzerland's and Ukraine's way of support. In North and South America only the large economies such as Canada, the USA and Brazil support the consumers over the producers. Basically the political economy of protecting producer and consumer depends upon their share of votes in elections. Capitalistic countries protect more producer compared to consumer, contrastingly, socialist or mixed economies

protect more consumer because of political benefits in elections. (Consumers 100% votes).

Support to producers and consumers

In general, when the governments support the producer, there is rise in inflation and the consumer is affected with price rise which in turn reflects as less economic growth at national level. On an international level, international prices of commodities fall down, trade is effected and world growth slows down. Reasons for supporting producer could be farmers lobby and votes in elections. Protection of producers beyond the specified limits is also against the WTO-AOA. For the period of 2014-2016, the countries such as South Africa, Australia, New Zealand, Japan, Korea, Israel, Turkey, China, Indonesia, Kazakhstan, Philippines, Vietnam, European Union, Iceland, Norway, Switzerland, Russia, Canada, the USA, Mexico, Costa Rica, Chile, Brazil, Colombia, and OECD show Producer Support Estimates to be higher than the Consumer Support Estimates.

When the governments support the consumer, the producer is adversely affected. However, the economic growth improves accompanied by more trade and easy market access resulting in more taxes. Also, the international trade improves and WTO AOA would be satisfied. This scenario could be observed only in the case of Ukraine for the years 1995-97 and 2014-16. Predominantly, in developed nations, producers are more supported in contrast to the developing countries, where consumers are more protected. The tax burden on the consumer increases with the support to the producer. The regulating agencies such as the hierarchical bureaucracy avoid budget deficits. Ministry of Agriculture protects off-budget programs like tariffs and quotas which affects access of export markets. Intervention of governments in the agriculture sector, is a necessity as it is not a profitable business. Also, governments in various countries have been protecting agriculture since ages. In fact, developed countries protect more agriculture. Inflation tackling is a problem for poverty – ridden countries, which puts an obligation to protect the consumer.

Table 11. Producer and Consumer support estimates with growth rates

Producer Support Estimate by country					**Consumer Support Estimate by country**				
Continent/Country	**1986-88**	**1995-97**	**2014-16**	**Growth Rate (%)**	**Continent/Country**	**1986-88**	**1995-97**	**2014-16**	**Growth Rate (%)**
AFRICA					**AFRICA**				
South Africa[1]					**South Africa[1]**				
PSE (million USD)	..	970	585	-2.50	CSE (million USD)	..	-965	-402	-4.28
Percentage PSE (%)	..	10.6	3.2		Percentage CSE (%)	..	-11.3	-2.3	
Producer NAC (coeff.)	..	1.12	1.03		Consumer NPC (coeff.)	..	1.13	1.02	
AUSTRALASIAN					**AUSTRALASIAN**				
Australia					**Australia**				
PSE (million USD)	1506	1282	879	-1.87	CSE (million USD)	-600	-267	0	-100.00
Percentage PSE (%)	10.3	5.8	1.9		Percentage CSE (%)	-11.7	-3.4	0.0	
Producer NPC (coeff.)	1.08	1.03	1.00		Consumer NPC (coeff.)	1.13	1.04	1.00	
New Zealand					**New Zealand**				
PSE (million USD)	429	53	124	4.34	CSE (million USD)	-53	-24	-85	6.53
Percentage PSE (%)	10.3	0.8	0.8		Percentage CSE (%)	-5.6	-1.6	-3.1	
Producer NPC (coeff.)	1.02	1.00	1.01		Consumer NPC (coeff.)	1.06	1.02	1.03	
ASIA					**ASIA**				
Japan					**Japan**				
PSE (million USD)	49757	58891	39817	-1.94	CSE (million USD)	-61284	-76199	-45595	-2.54
Percentage PSE (%)	64.0	58.2	47.0		Percentage CSE (%)	-62.3	-53.7	-39.9	
Producer NPC (coeff.)	2.65	2.30	1.75		Consumer NPC (coeff.)	2.65	2.16	1.66	
Korea					**Korea**				
PSE (million USD)	12040	23080	20688	-0.55	CSE (million USD)	-11786	-23777	-21857	-0.42
Percentage PSE (%)	70.0	66.9	49.3		Percentage CSE (%)	-65.9	-64.9	-45.2	
Producer NPC (coeff.)	3.31	2.91	1.89		Consumer NPC (coeff.)	2.94	2.87	1.83	
Israel[1,3]					**Israel[1,3]**				
PSE (million USD)	..	810	1 269	2.27	CSE (million USD)	..	-722	-955	1.41
Percentage PSE (%)	..	20.7	15.7		Percentage CSE (%)	..	-19.6	-11.5	
Producer NPC (coeff.)	..	1.19	1.13		Consumer NPC (coeff.)	..	1.25	1.13	
Turkey					**Turkey**				
PSE (million USD)	4326	8079	17159	3.84	CSE (million USD)	-3125	-5552	-10685	3.33
Percentage PSE (%)	22.8	29.0	26.5		Percentage CSE (%)	-22.8	-25.4	-22.3	

Producer NPC (coeff.)	1.23	1.28	1.31		Consumer NPC (coeff.)	1.30	1.35	1.29	
China[1]					**China[1]**				
PSE (million USD)	..	6667	215271	18.97	CSE (million USD)	..	-2205	-160240	23.90
Percentage PSE (%)	..	2.7	14.9		Percentage CSE (%)	..	-0.9	-11.3	
Producer NPC (coeff.)	..	1.00	1.13		Consumer NPC (coeff.)	..	1.01	1.14	
Indonesia[1,6]					**Indonesia[1,6]**				
PSE (million USD)	..	1330	31665	17.18	CSE (million USD)	..	-1162	-32548	18.13
Percentage PSE (%)	..	3.5	24.9		Percentage CSE (%)	..	-3.2	-30.2	
Producer NPC (coeff.)	..	1.03	1.32		Consumer NPC (coeff.)	..	1.03	1.47	
Kazakhstan[1]					**Kazakhstan[1]**				
PSE (million USD)	..	274	893	6.09	CSE (million USD)	..	-356	233	-198.00
Percentage PSE (%)	..	6.7	5.0		Percentage CSE (%)	..	-9.7	3.9	
Producer NPC (coeff.)	..	1.06	0.97		Consumer NPC (coeff.)	..	1.10	0.98	
Philippines[7]					**Philippines[7]**				
PSE (million USD)	..	2011	7593	6.87	CSE (million USD)	..	-2109	-7940	6.85
Percentage PSE (%)	..	20.5	24.5		Percentage CSE (%)	..	-21.2	-25.0	
Producer NPC (coeff.)	..	1.29	1.33		Consumer NPC (coeff.)	..	1.30	1.35	
Viet Nam[7]					**Viet Nam[7]**				
PSE (million USD)	..	518	-992	-203.14	CSE (million USD)	..	-605	-1746	5.44
Percentage PSE (%)	..	5.9	-2.5		Percentage CSE (%)	..	-8.0	-4.9	
Producer NPC (coeff.)	..	1.07	0.99		Consumer NPC (coeff.)	..	1.09	1.07	
EUROPE					**EUROPE**				
European Union[2]					**European Union[2]**				
PSE (million USD)	97379	116953	101819	-0.69	CSE (million USD)	-72475	-58351	-21563	-4.86
Percentage PSE (%)	39.2	33.8	19.6		Percentage CSE (%)	-35.7	-20.8	-4.7	
Producer NPC (coeff.)	1.69	1.33	1.05		Consumer NPC (coeff.)	1.69	1.30	1.05	
Iceland					**Iceland**				
PSE (million USD)	193	131	204	2.24	CSE (million USD)	-112	-59	-103	2.83
Percentage PSE (%)	77.2	60.4	55.5		Percentage CSE (%)	-70.4	-42.9	-43.2	
Producer NPC (coeff.)	4.16	2.32	1.98		Consumer NPC (coeff.)	4.38	1.82	1.77	
Norway					**Norway**				
PSE (million USD)	2801	2910	3456	0.86	CSE (million USD)	-1333	-1261	-1712	1.54

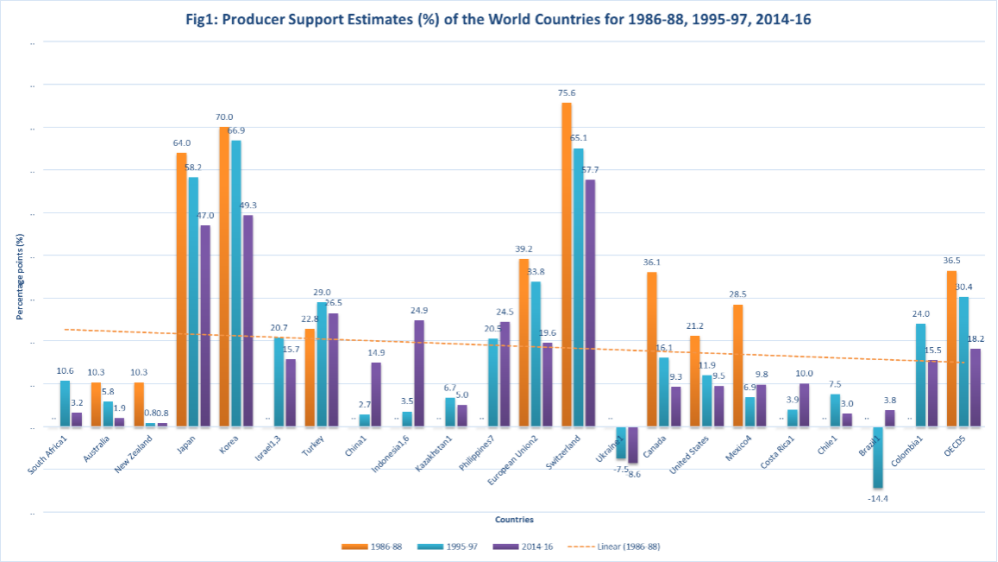
Percentage PSE (%)	70.4	66.3	59.7		Percentage CSE (%)	-55.8	-47.4	-42.5	
Producer NPC (coeff.)	4.06	2.50	1.91		Consumer NPC (coeff.)	3.22	2.12	1.83	
Switzerland					**Switzerland**				
PSE (million USD)	6739	7175	7272	0.07	CSE (million USD)	-6459	-5763	-4172	-1.60
Percentage PSE (%)	75.6	65.1	57.7		Percentage CSE (%)	-74.3	-60.8	-40.4	
Producer NPC (coeff.)	4.21	2.69	1.68		Consumer NPC (coeff.)	4.49	2.91	1.69	
Russia[1]					**Russia[1]**				
PSE (million USD)	..	6522	11262	2.77	CSE (million USD)	..	-1561	-9720	9.58
Percentage PSE (%)	..	19.6	13.9		Percentage CSE (%)	..	-5.4	-12.0	
Producer NPC (coeff.)	..	1.07	1.10		Consumer NPC (coeff.)	..	1.05	1.14	
Ukraine[1]					**Ukraine[1]**				
PSE (million USD)	..	-1169	-2552	3.98	CSE (million USD)	..	1950	2302	0.83
Percentage PSE (%)	..	-7.5	-8.6		Percentage CSE (%)	..	19.6	13.6	
Producer NPC (coeff.)	..	0.87	0.88		Consumer NPC (coeff.)	..	0.82	0.86	
NORTH AMERICA					**NORTH AMERICA**				
Canada					**Canada**				
PSE (million USD)	6136	3524	4424	1.14	CSE (million USD)	-2860	-1758	-2968	2.65
Percentage PSE (%)	36.1	16.1	9.3		Percentage CSE (%)	-22.7	-11.2	-10.0	
Producer NPC (coeff.)	1.38	1.10	1.06		Consumer NPC (coeff.)	1.33	1.13	1.11	
United States					**United States**				
PSE (million USD)	35337	25617	38413	2.05	CSE (million USD)	-2630	6157	29648	8.18
Percentage PSE (%)	21.2	11.9	9.5		Percentage CSE (%)	-2.4	4.3	11.6	
Producer NPC (coeff.)	1.12	1.06	1.03		Consumer NPC (coeff.)	1.12	1.08	1.04	
Mexico[4]					**Mexico[4]**				
PSE (million USD)	8437	1645	5694	6.41	CSE (million USD)	-6363	234	-339	-201.78
Percentage PSE (%)	28.5	6.9	9.8		Percentage CSE (%)	-24.5	0.4	-0.6	
Producer NPC (coeff.)	1.34	1.01	1.02		Consumer NPC (coeff.)	1.38	1.02	1.02	
Costa Rica[1]					**Costa Rica[1]**				
PSE (million USD)	..	88	501	9.09	CSE (million USD)	..	-87	-467	8.77
Percentage PSE (%)	..	3.9	10.0		Percentage CSE (%)	..	-8.0	-17.8	
Producer NPC (coeff.)	..	1.04	1.11		Consumer NPC (coeff.)	..	1.09	1.22	
SOUTH AMERICA					**SOUTH AMERICA**				
Chile[1]					**Chile[1]**				
PSE (million USD)	..	390	393	0.04	CSE (million USD)	..	-392	-32	-11.77
Percentage PSE (%)	..	7.5	3.0		Percentage CSE (%)	..	-7.6	-0.3	

Producer NPC (coeff.)	..	1.07	1.00		Consumer NPC (coeff.)	..	1.08	1.00	
Brazil[1]					**Brazil[1]**				
PSE (million USD)	..	-6826	6221	-199.56	CSE (million USD)	..	6442	-166	-184.01
Percentage PSE (%)	..	-14.4	3.8		Percentage CSE (%)	..	12.3	-0.3	
Producer NPC (coeff.)	..	0.82	1.01		Consumer NPC (coeff.)	..	0.89	1.02	
Colombia[1]					**Colombia[1]**				
PSE (million USD)	..	3451	4112	0.88	CSE (million USD)	..	-3207	-3392	0.28
Percentage PSE (%)	..	24.0	15.5		Percentage CSE (%)	..	-30.3	-15.4	
Producer NPC (coeff.)	..	1.30	1.13		Consumer NPC (coeff.)	..	1.44	1.18	
OECD[5]					**OECD[5]**				
PSE (million USD)	217205	250539	234829	-0.32	CSE (million USD)	-161826	-167735	-78863	-3.70
Percentage PSE (%)	36.5	30.4	18.2		Percentage CSE (%)	-33.2	-24.2	-7.6	
Producer NPC (coeff.)	1.51	1.31	1.10		Consumer NPC (coeff.)	1.59	1.37	1.13	

Note: p: provisional. NPC: Nominal Protection Coefficient. NAC: Nominal Assistance Coefficient. 1. Data are presented from 1995 onwards. 2. EU12 for 1986-88; EU15 for 1995-97; and EU28 from 2014 when available. 3. The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law. 4. For Mexico, the period 1986-88 is replaced by 1991-93. 5. OECD EU countries are included individually in the OECD total for all years prior to their accession to the EU except Latvia, for which data is not available. Slovenia is only included from 1992. The OECD total does not include the non-OECD EU member states. 6. For Indonesia, the period 2014-16 is replaced by 2013-15. 7. For Philippines and Viet Nam, the period 1995-97 is replaced by 2000-02. Data are presented from 2000 onwards.

Source: OECD (2017), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database).

The Producer support estimates percentages of the various countries are given in the Figure 1. The trend line is drawn with the base-line of 1986-88.



The Contribution of Budgetary Payments to change in Producer Support Estimate by country, 2015 to 2016 is given in Table 12. Most of the developed economies such as Australia, New Zealand, Japan the EU, Iceland, Switzerland, Norway and Canada; some of the developing economies such as Turkey, Vietnam, Russia and Brazil; and the OECD Countries have positive change towards the contribution of budgetary Payments to change in Producer Support Estimate by country, 2015 to 2016.

Table 12. Contribution of Budgetary Payments to change in Producer Support Estimate by country, 2015 to 2016

Country	Producer Support Estimate (PSE)	% change in PSE, contribution of Budgetary Payments, all other variables held constant							
	% change	Total	Payments based on:						
			Output	Input use	Current A/An/R/I, production required	Non-current A/An/R/I, production required	Non-current A/An/R/I, production not required	Non-commodity criteria	Miscellaneous payments
AFRICA									
South Africa	*-44.1*	*-0.6*	*0.0*	*1.6*	*-2.2*	*0.0*	*0.0*	*0.0*	*0.0*
AUSTRALASIAN									
Australia	*14.7*	*14.7*	*0.0*	*7.8*	*3.3*	*0.0*	*4.4*	*0.0*	*-0.9*
New Zealand	*49.7*	*3.6*	*0.0*	*2.3*	*1.3*	*0.0*	*0.0*	*0.0*	*0.0*
ASIA									
Israel (2)	*-3.3*	*-0.4*	*-0.1*	*-0.1*	*-0.1*	*0.0*	*-0.0*	*0.0*	*0.0*
Japan	*6.4*	*0.6*	*-0.3*	*-0.4*	*0.9*	*0.0*	*0.4*	*0.0*	*0.0*
Korea	*-1.4*	*2.6*	*0.0*	*0.2*	*2.4*	*0.0*	*-0.0*	*0.0*	*0.0*
Turkey	*10.2*	*1.9*	*0.8*	*0.2*	*0.9*	*0.0*	*0.0*	*0.0*	*0.0*
China	*-1.5*	*-0.2*	*0.0*	*-0.3*	*0.3*	*0.0*	*-0.2*	*0.0*	*-0.1*
Viet Nam	*8.4*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Kazakhstan	*-136.2*	*7.8*	*2.6*	*8.2*	*-3.4*	*0.0*	*0.0*	*0.4*	*0.0*
Philippines	*-16.7*	*-0.8*	*0.0*	*-0.9*	*0.1*	*0.0*	*0.0*	*0.0*	*0.0*

Indonesia (4)	..	..	..	..	..	..	..	..	..
EUROPE									
European Union (1)	*6.6*	*2.8*	*-0.1*	*-2.8*	*7.3*	*-0.1*	*-1.7*	*0.0*	*0.1*
Iceland	*2.6*	*0.8*	*0.4*	*0.1*	*0.1*	*0.2*	*0.0*	*0.0*	*0.0*
Switzerland	*1.8*	*0.4*	*0.0*	*0.1*	*0.2*	*0.0*	*0.0*	*-0.2*	*0.3*
Norway	*-0.3*	*-0.7*	*0.6*	*0.2*	*-1.2*	*-0.2*	*0.0*	*0.0*	*0.0*
Ukraine	*-47.0*	*-15.9*	*0.0*	*-15.9*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Russia	*43.1*	*-8.5*	*0.6*	*-6.2*	*-1.3*	*0.0*	*0.0*	*-1.6*	*0.0*
NORTH AMERICA									
Costa Rica	*-3.0*	*-1.0*	*0.0*	*-1.0*	*0.0*	*0.0*	*0.0*	*-0.0*	*0.0*
Mexico	*-19.2*	*-4.2*	*-0.3*	*-3.8*	*1.7*	*-1.8*	*0.0*	*0.0*	*0.0*
United States	*-12.8*	*-2.5*	*-0.2*	*-1.3*	*-0.6*	*0.0*	*0.1*	*0.0*	*-0.5*
Canada	*25.9*	*11.9*	*0.0*	*-0.5*	*12.5*	*-0.0*	*0.0*	*-0.0*	*0.0*
SOUTH AMERICA									
Brazil	*105.2*	*5.2*	*0.4*	*4.2*	*0.5*	*0.0*	*0.0*	*0.0*	*0.0*
Chile	*-7.1*	*-6.6*	*0.0*	*-0.0*	*-6.6*	*0.0*	*0.0*	*0.0*	*0.0*
Colombia	*-1.3*	*-8.7*	*-1.5*	*-7.3*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
OECD (3)	*2.2*	*1.5*	*-0.0*	*-1.4*	*3.5*	*-0.1*	*-0.5*	*0.0*	*-0.0*

1. 28 member countries.
2. The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.
3. Average of % changes in PSE in OECD countries (in national currency) weighted by the shares of national PSEs within the PSE of the OECD of the previous year; not equivalent to the change in OECD PSE expressed in a common currency.
4. 2016 data are not available and hence no decomposition could be made.

Source: OECD (2017), "Producer and Consumer Support Estimates", OECD Agriculture statistics (database).

Conclusion

International political economy studies problems that arise from or are affected by the interaction of international politics, international economics, and different social systemsThe study focused on the incentives and strategies of politicians, economists, agency officials, and environmental advocates and how this web of interactions affects agricultural and food policies, farmers, consumer, welfare and economic growth. It was found that most of the developed countries are capitalistic and developing countries are socialistic. Only few countries which are communist. But majority of the countries in the world are mixed economies in operation. These type of economies play an important role in resource allocation and protection of agriculture.

The real GDP (%) is either increasing or follows a mixed trend in case of developed countries in contrast to the developing countries decreasing trend. However, the decreasing trend of developing countries real GDP (%) will not enable them to allocate more on agriculture. All the G7 advanced

economies, 30 emerging and developing Asian economies, only 4 countries (China, India, Indonesia and Thailand), among the Middle Eastern countries, North Africa, Afghanistan and Pakistan, the UAE, Saudi Arabia and Iran are major economies with at least 0.5% of Global GDP. And in 45 Sub-Saharan African Countries only Nigeria has at least 0.5% of Global GDP. It shows that Africa is the highest backward continent in the world. Countries which have less than 0.5% of Global GDP has a disadvantage in budget allocation to agriculture. Nigeria has the maximum (17.8%) share of GDP to Agriculture, followed by India (17.2 %). The UK (0.7%), Belgium (0.7%), Germany (0.8%) and the UAE (0.8%) have the least share of agriculture sector contribution to their GDP's. And the economies of the US and France have almost service sector share of nearly 80%.

Government investments may be assigned priorities according to their cost-benefit ratios. High dependence on agriculture is observed in most of the developing countries and the high income economies are focusing more on (>50%) service sector. Saudi Arabia and the UAE has high industry sector share (>50%) which is due to their exploration of oil and petroleum reserves. The more dependence on agriculture will allow the politicians to exploit in the elections. The political economy of AOI indicates that the countries which have more than 1 will spend more budget in budget allocation towards agriculture. It was found that most of the countries AOI is less than 1, which depicts that, clearly agriculture globally is not on the priority list for the local central governments, except for South Korea and Switzerland, whose agriculture orientation index is greater than 1(1.96 and 5.08 respectively).

International institutions Governments like World Bank has been giving low to medium preference to funding in Agriculture, Fishing and Forestry, among various sectors. This shows that poor treatment towards the agriculture sector. The study observed that Middle East and North African Countries are funded extremely low in comparison to other regions of the world by IDA and IBRD. This could be due to the political instability and terrorism, which hinders the growth of the regions. The sudden increase of funds to Argentina and decreased funding for the countries Nigeria, India, Mexico and Brazil was found.

The numerical targets established by the URAA are not followed in many WTO member countries which have comparative advantage. During the period 2000 to 2016, Russia, India, China and New Zealand are given more domestic support and Mexico, Chile, USA, Japan and OECD countries were given decreasing support to agricultural sector than compared to other WTO member countries. Among the Asian countries Korea, China, Indonesia and Vietnam support the consumers over the producers. Whereas, Kazakhstan, Turkey, Israel and Japan supports the producers over the consumers. In the European nations, Iceland, Norway and Russia support the consumers over the

producers in contrast to the Switzerland's and Ukraine's way of support. In North and South America only the large economies such as Canada, the USA and Brazil support the consumers over the producers.

The political economy of protecting producer and consumer depends upon their share of votes in elections. Capitalistic countries protect more producer compared to consumer, contrastingly, socialist or mixed economies protect more consumer because of political benefits in elections. Globally, political and economic systems, international governments like World Bank, Trade organizations and WTO's attitude towards agriculture is poor. Hence, agriculture must be brought on the global political agenda for the sustainable food security, economic development and to achieve Millennium Development Goals (MDG's). The protection of producers and consumers is being based on the political will of the governments. The study suggests that, economic minded politicians and political minded economists who has knowledge of social, political and economic systems are required in efficient economic system of agriculture.

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APPENDIX I

Countries and their economies

No.	Country/Economy	Features
	AFRICA	
1	Nigeria	Anocracy, Aristocracy, Banana Republic, Common Wealth, Democracy, Dictatorship, Emirate, Federal Republic, Kleptocracy, Parliamentary Republic.
	ASIA	
1	Indonesia	Asymmetrical Federation, Bureaucracy, Colony, Democracy, Federal Republic, Kleptocracy, Parliamentary Republic, Presidential Democracy, Republic, Unitary state.
2	Iran	Authoritarian, Autocracy, Gerontocracy, Islamic Republic.
3	Saudi Arabia	Absolute Monarchy, Authoritarian, Autocracy, Emirate, Kleptocracy, Monarchy, Unitary State, Welfare State.
4	Turkey	Authoritarian, Parliamentary Democracy, Parliamentary Republic, Republic, Unitary State.
	EUROPE	
1	Russia	Anocracy, Asymmetrical Federation, Authoritarian, Corporatocracy, Dictatorship, Elective Monarchy, Federalism, Feudalism, Kleptocracy, Leninism, Marxism, Noocracy, Oligarchy, Parliamentary Republic, Provisional Government, Republic, Socialist Republic, Stratocracy, Technocracy.
2	Poland	Alliance, Authoritarian, Democracy, Parliamentary Democracy, People's Republic, Unitary State.
	SOUTH AMERICA	
1	Colombia	Democracy, Federal Republic, Unitary State.
2	Argentina	Bureaucracy, Colony, Democracy, Dictatorship, Federal Republic, Federalism, Liberal Democracy, Republic, Stratocracy.
3	Venezuela	Authoritarian, Despotism, Federal Republic, Federalism, Oligarchy, Republic.
4	Brazil	Colony, Democracy, Federal Republic, Federalism, Liberal Democracy, Parliamentary Republic, Republic.