

THE IMPLICATION OF WORLD BANK IN RAISING AGRICULTURAL PRODUCTIVITY

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Abstract: *Agriculture is seen as an important tool for poverty reduction, 4 times more effective than increasing the incomes of the poorest of the population. Eradicating poverty is one of the main objectives of the World Bank and through this perspective it's involvement in agriculture becomes obvious. In this sense it collaborates with countries to improve the productivity of farms, livestock and fisheries, promotes innovation through research and education, and facilitates responsible agricultural investment. Bank collaboration with countries is required in order to support governments to take the best decisions in the process of allocation of resources for the agriculture field development. The paper aims to analyze into how the World Bank manages to help increase productivity in the agricultural sector.*

Key words: *agriculture, productivity, innovation, sustainability, strategy*

INTRODUCTION

Agriculture remains critical for food and nutrition security, improving incomes and employment, and providing environmental services. [2] The World Bank implication in these area is reflected in it's Agriculture Action Plan for Fiscal Years 2013-2015. This Plan is continuing the ideas from the previous plan that included 2010-2012 period, and reveals the World Bank Group commitment to agriculture and related sectors, projected at between \$8 billion to \$10 billion annually over the next three years. Scaled-up support is needed to meet the World Bank Group goals of reducing poverty, increasing shared prosperity, and promoting environmental sustainability. The main goals are raising agricultural productivity and resilience, climate-smart agriculture, private sector responses, longer-term risk management, gender mainstreaming, nutrition, and landscape approaches to farming and to land use more generally.

An important issue is the evolving and volatile context, because the higher short-term food price volatility is increasingly becoming a longer-term phenomenon. [1] The increased frequency and intensity of weather events do not make things easier because it is hard to produce enough food for the world's growing population, which, combined with projected rising demand and the inherent slow responsiveness of the food system, is leading to high food price volatility. [3] It is true that the increase of prices offered improved incentives to producers but the increase of food price volatility and input costs conduced also to their weakness. Private investment in the area is higher than three years ago and the focus of the World Bank, donor governments and developing countries is on agricultural field. A more increased implication of the public sector is required.

According to the Agriculture Action Plan for Fiscal Years 2013-2015 ([7]), in recognition of the evolving global context, the World Bank will give more emphasis to:

✚ climate-smart agriculture, within the theme of agricultural productivity growth, including increasing the share of IBRD/IDA/IFC agriculture lending and investments that support climate change adaptation and mitigation, such as improved land and water management, development and adoption of more drought and flood tolerant plant

varieties, and support for animal and forest management systems that reduce and absorb greenhouse gas (GHG) emissions;

- ✚ facilitating private sector response, including, but not limited to, increasing IFC's agribusiness investments by about 65 percent (projected) to, on average, between \$4 billion to \$5 billion annually in FY2013-15;

- ✚ pursuing agriculture risk management more explicitly, including increasing the number of country-level agriculture sector risk assessments, and continued development of new market-based risk-hedging instruments for farmers;

- ✚ improving gender mainstreaming by raising the bar for agriculture beyond the Bank standard;

- ✚ greater attention to nutritional outcomes of agriculture actions, including increasing the share of agriculture projects with an explicit focus on nutrition;

- ✚ more use of landscape approaches, including increasing the number of projects that combine agriculture, water, forestry, and biodiversity complementarities;

- ✚ governance, including strengthening analytical work to better understand the nature of political and institutional constraints to improving agriculture performance, and support to improve the governance of land tenure.

MATERIALS AND METHODS

The research was accomplished from a double perspective, in which the conceptual methodological approach is correlated to a variety of references to practical actions aiming the role of World Bank in achieving sustainable growth and raising productivity in the agricultural field, based on the current knowledge in the field.

The results expressed in this paper were the result of a qualitative analysis of the characteristics, the evolution and the challenges that agricultural field is facing in a context of continuing climate change and growth of world population in which raising productivity is a key factor in the world development.

RESEARCH RESULTS

A. Raise Agricultural Productivity

Raising food crop yields and increasing their resilience to climate change are the most important actions needed for sustainable global food security.

A more climate-smart agriculture is needed. What is a climate-smart agriculture? Climate-smart agriculture seeks to increase productivity in an environmentally and socially sustainable way, strengthen farmers' resilience to climate change, and reduce agriculture's contribution to climate change by reducing greenhouse gas emissions and increasing carbon storage on farmland. For each 1° Celsius of global warming, grain yields are projected to decline by 5 percent that is why a bigger effort is needed to raise productivity, improve resilience, reduce GHG emissions, and enhance soil carbon storage. [9]

In this regard, according to the same World Bank Agriculture Action Plan for Fiscal Years 2013-2015, the key actions are:

- ✚ increase the share of IDA/IBRD agriculture lending that supports climate change *adaptation* (31 percent in FY2011-12), such as improved agricultural management practices, and development and adoption of more drought and flood tolerant varieties;

- ✚ increase the amount of IFC financing for use of high efficiency irrigation;

- ✚ increase the share of IDA/IBRD agriculture lending that supports climate

change *mitigation* (20 percent in FY2011-12), such as animal and forest management systems that reduce GHG emissions.

Major cereal yields produced in developing countries recorded a decline in the growth rate in the last two decades, but after 2006, they rise from a low of about 1 percent to about 1.8 percent (figure no. 1). This recent yield growth has not matched annual growth in consumption, with some of the shortfall being made up by an expansion of area planted on degraded or converted land. While in certain regions in some countries there is still some scope for further expansion of uncultivated lands the aggregate land frontier is closing, and future supply growth will need to rely more on yield increases.

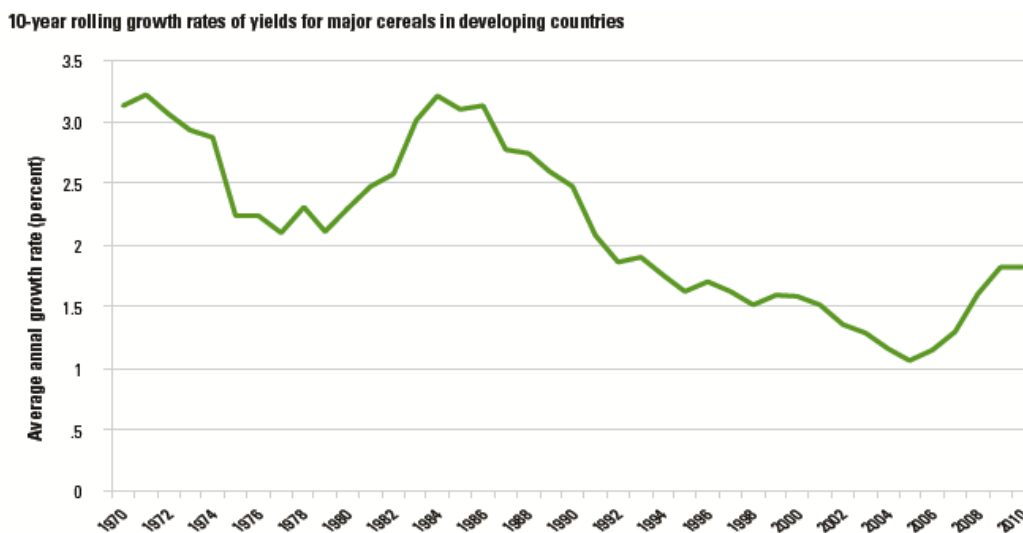


Figure 1. Growth Rates of Yields for Major Cereals Have Begun to Rise but Remain Low

Source: derived from USDA data

Closing the crop yield gap is another area that is in the attention of the World Bank. In this field the Bank tries to expand the reach of demand-driven pluralistic extension and advisory services, to strengthen rural access to financial services and increase input markets and investments and to expand the use of information and communication technologies.

Closing the livestock productivity gap has its own place in the concerns of World Bank. In this regard the Bank will provide matching grants for adoption of new breeds, extend the reach of extension and advisory services to improve animal and rangeland management practices and the veterinary services and vaccinations, support pasture management and decrease gender inequality.

Raising aquaculture yields and fisheries sustainability is also a goal for the World Bank because the aquaculture and capture fisheries provide an important source of income and protein for many poor people (15 percent of global dietary protein). Over the last several decades, the annual volumes of global capture fisheries has remained relatively stagnant while aquaculture production has increased significantly (7.6 percent annual growth since 1990) (figure 3). The Bank has already provided support in these area and will continue to do so, by supporting the increase of the capacity of developing countries to implement and enforce effective management of capture fisheries, the development of fishing port infrastructure and the development of the aquaculture practices.

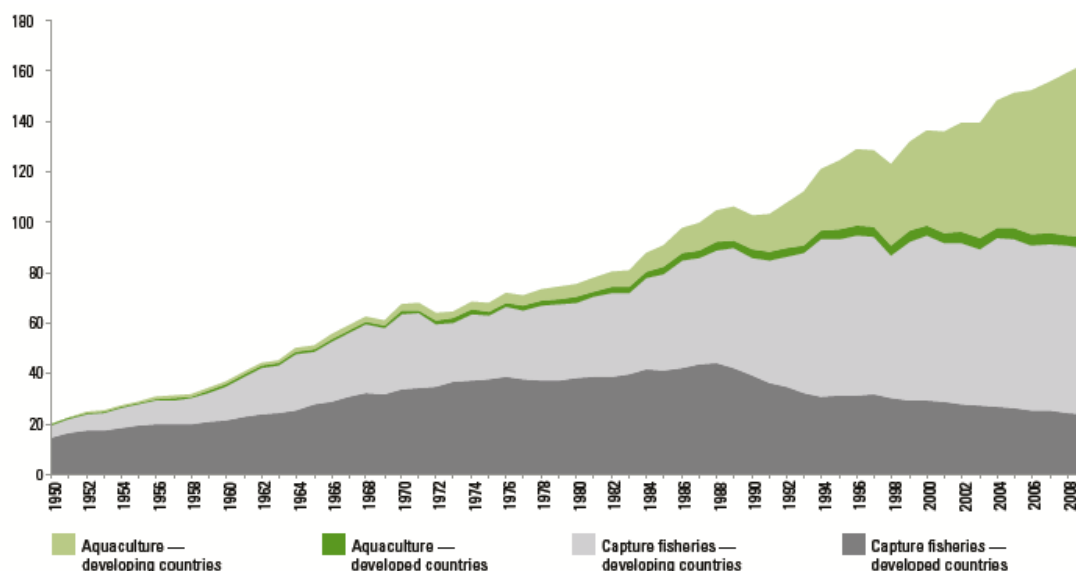


Figure 2. Global Aquaculture and Capture Fisheries Production (millions tons)

Source: Derived from FAO data.

The World Bank is giving a great importance to *improving agricultural water management in rainfed and irrigated areas*. Combined with an improvement in other production factors, such as soil fertility, crop varieties, and tillage practices, better management of rainfall and runoff can help to achieve significant increases in yields and agricultural productivity. The expansion of irrigation will also continue to be an important source of productivity growth.

Improve the governance of land tenure and land markets is another goal of the World Bank in its objective to increase productivity. The WBG is especially concerned that large-scale land acquisitions do not disadvantage smallholder farmers, who depend on land for their livelihoods. The WBG supports (and consistently recommends) government policies that implement systematic land surveying and titling programs that recognize all forms of land tenure. Since 1990, the Bank has provided finance of \$2.7 billion to more than 60 land administration projects around the world. [11]

The World Bank *supports international cooperation on principles of responsible agricultural investments*. In these regard the most important Principles of Responsible Agricultural Investments that the World Bank promotes are:

- ✚ Existing rights to land and associated natural resources are recognized and respected.
- ✚ Investments do not jeopardize food security but rather strengthen it.
- ✚ Processes for accessing land and other resources, and making associated investments, are transparent, monitored, and ensure account-ability by all stakeholders, within a proper business, legal, and regulatory environment.
- ✚ All those materially affected are consulted, and agreements from consultations are recorded and enforced.
- ✚ Investors ensure that projects respect the rule of law, reflect industry best practice, are viable economically, and result in durable shared value.
- ✚ Investments generate desirable social and distributional impacts and do not increase vulnerability.
- ✚ Environmental impacts due to a project are quantified and measures taken to encourage sustainable resource use while minimizing the risk/magnitude of negative

impacts and mitigating them.

Another important area that benefits by the support of the World Bank in its goal to increase productivity is the *strengthening of the agricultural innovation systems (agricultural research, extension, education, training), including promotion of more nutritious food crop diversification*. In this regard the World Bank is focusing on improving the relevance and responsiveness of cutting edge and traditional research, on ensuring better links between research and extension and other innovation actors; on enhancing the use of new agricultural innovations in improving rural; on education and training, in collaboration with HDN, including for capacity building, institutional development, and tertiary education. An important attention will be given to sustainable financing of agricultural research and partnership development, in which public sector financing remains essential for agricultural research, though not excluding the fact that can be done more to facilitate private sector research.

Support consideration of new technology tools is also in the attention of the World Bank. In these regard will continue to respond to requested client demand when activities related to new or less common technologies, ranging from organic farming to biotechnology, including transgenics, have a potential to contribute to poverty reduction, economic growth, and environmental sustainability.

The World Bank is also *considering the opportunities for mechanization*. For this will support actions to pilot the establishment of leasing and rental markets and scale up those initiatives that prove successful.

B. The need of investment in the agriculture

Substantial increases in agricultural investments in developing countries are needed to combat poverty and realize food security and nutrition goals. Agricultural investment is the most important and most effective strategy for poverty reduction in rural areas, where the majority of the world's poorest people live. Investing in agriculture reduces poverty and hunger through multiple pathways. However, low investment in the agricultural sector and into smallholder farms in particular in most developing countries over the past 30 years has resulted in low productivity and stagnant production. The recent food crisis has exposed these weaknesses, as agricultural production was slow to respond to rising prices. Yet, the agricultural sector faces a considerable challenge over the next four decades. [13]

World agriculture must feed a projected population of 9 billion people by 2050, some 2.5 billion more than today, and most of the growth in population will occur in countries where hunger and natural resource degradation are already rife. [5] Crop and livestock production systems must become more intensive to meet growing demand but they must also become more sustainable. Additional investments of over US\$80 billion every year are needed in agriculture to meet targets for reducing poverty and the numbers of malnourished. [12] Meeting the targets in a sustainable manner that preserves natural resources and is conducive to long-term development will require even more capital.

In the case of emerging countries in Europe there is a direct link between FDI, exports and level of economic development.

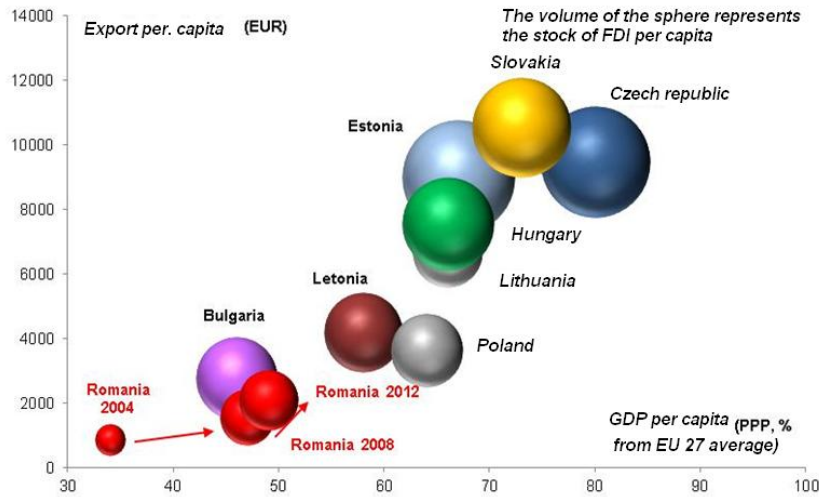


Figure 3. The stock of FDI per capita exports of goods per capita and GDP per capita at purchasing power parity (2012, except for Romania is seen in evolution)
 Source: made by the author based on Eurostat information

Romania has attracted foreign investment mainly in the tradable goods sector, but export-oriented services have convinced investors.

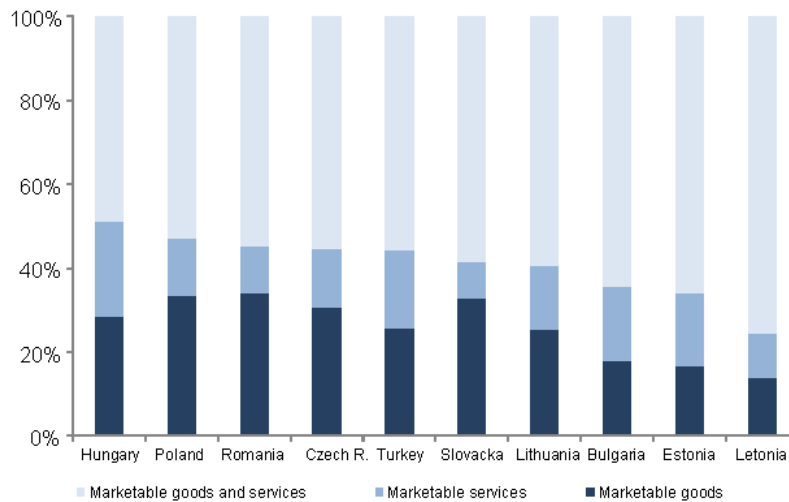


Figure 4. The structure of foreign direct investments (stock, 2012)
 Source: made by the author based on Eurostat information

Regulation of credit and investor protection are strengths of Romania, while the annual payment of taxes hamper business

Ease of doing business 2006	Ease of doing business 2013
1. New Zealand	1. Singapore
2. Singapore	2. Hong Kong
3. SUA	3. New Zealand

...	...
77. Argentina	71. Turkey
78. Romania	72. Romania
79. Russia	73. Italy
...	...
155. Kongo	185. Central African Republic

Source: Doing Business Reports, World Bank

According to World Bank, Doing Business Report, [6] Romania is registering the following places:

- ✚ Opening a business: 68th place
- ✚ Obtaining building permits: 129 place
- ✚ Access to electricity: 168 place
- ✚ Registering property: 72nd place
- ✚ Getting credit: 12th place
- ✚ Investor protection: 49th place
- ✚ Payment of fees: 136 place
- ✚ Foreign trade: 72nd place
- ✚ Conclusion of contracts: place 60
- ✚ Resolving Insolvency: place 102

Romanian agriculture has captured the interest of foreign investors in recent years and a government-backed reform property may attract new investments

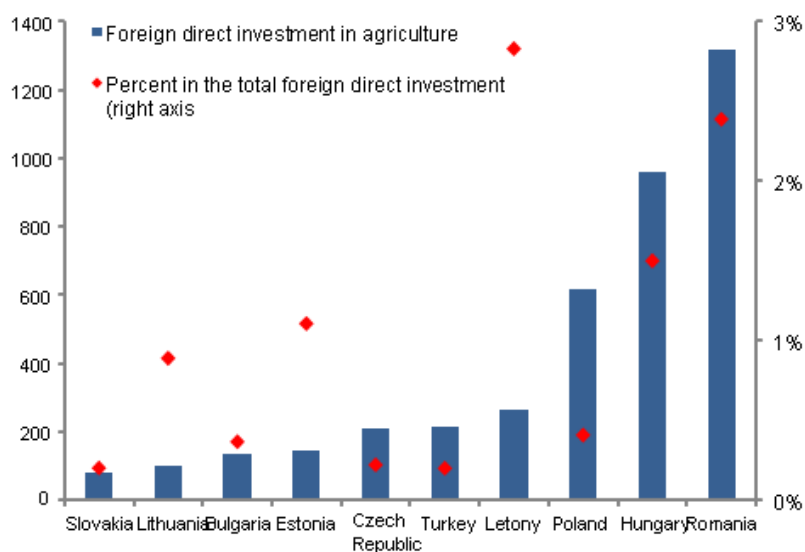


Figure 5. Foreign direct investments in agriculture (EUR million, Stock 2012) and their share in total (%)

Source: made by the author based on Eurostat information

CONCLUSIONS

The World Bank has an active role in increasing productivity in agriculture, a role which it assumed since the beginning and it tried as much as possible and take it to perform consistently. To support these actions is necessary to improve coordination of research policy itself and agrarian policies for innovation, supporting the introduction of organizational innovations that can optimize relations between actors in national and European food chains, an adequate level of income for agricultural operators, better functioning of food supply chains, recovery of the market power of agricultural operators and fairer distribution of value between agri-food sector actors, establishing a production model that reconcile agricultural production respecting the environment and sustainability.

The world as a whole and of individual countries have benefited greatly from the increased productivity of agriculture. A good portion of these benefits is due to technological progress determined by public investment made in research and development in the agricultural sector. The empirical data available suggest, however, that the benefits were higher than costs.

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