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Extended Abstract of Bachelor Thesis
Agricultural Production in Latin America

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Shrnutí:

Zemědělství je jednou z hlavních výrobních činností v Latinské Americe, která představuje 4,5% HDP regionu a do roku 2018 vzrostlo jeho zastoupení na celkovém vývozu na 22%. V této práci byla zemědělská výroba v Latinské Americe porovnána s proměnnými týkajícími se ekonomické výkonnosti této výroby a využití těchto zdrojů ve prospěch produkce potravin pro světový trh. Výzkum je založen na údajích o populaci, využívání půdy, hlavních zemědělských produktech, ekonomické hodnotě a dopadu na životní prostředí. Díky výzkumu bylo zjištěno, že Latinská Amerika je jedním z nejdůležitějších producentů potravin na světě, který v roce 2018 dosáhl exportní hodnoty kolem 219 miliard dolarů a má ambiciózní cíle rozšířit svou produkci do roku 2030. Analýza této práce je rozšířena tak, aby bylo vidět dopady, které má zemědělství na životní prostředí. V tomto segmentu nejsou výsledky příliš povzbudivé, protože dopad na životní prostředí vyvolaný zemědělskou výrobou je velmi negativní, např. se jedná o 6% snížení plochy lesních oblastí mezi roky 1990 a 2016 a nárůst produkce skleníkových plynů.

Ukázalo se, že zemědělská produkce v regionu je různorodá a složitá, vychází z tradic každé země, a je získávána za cenu ekologických dopadů a snižování populace venkovského obyvatelstva, která poklesla v období 1990–2020 o 10%. Navzdory dopadům na životní prostředí v Latinské Americe je důležité zmínit, že společným zájmem regionu je udržení jeho role jako jednoho z největších producentů potravin na planetě. Potřeba sladit výživu obyvatel Země a ochranu životního prostředí byla nastíněna jako nevyřešený úkol pro sociální subjekty spojené se zemědělskou výrobou

Klíčová slova: Výroba, Obchod, HDP, Trh, Latinská Amerika, Export, Dovoz, Životní prostředí, Půda, Zemědělství, Plodiny, Hektar, Venkov, Hospodářská zvířata, Skleníky a Populace.

Summary:

Agriculture is one of the main productive activity in Latin America, which accounts the 4.5% of the region's GDP and until 2018 with 22% of total exports. In this thesis, agricultural production in Latin America was contrasted with variables related to the economic value of its production and the use of resources in favor of world food. The research is based on population data, land use, main agricultural products, economic value and the impact on the environment. Because of the research, it was found that Latin America is one of the most important food producers in the world, reaching an export value in 2018 of around 219 billion dollars and with ambitious goals to expand their production by 2030. The analysis of this thesis is extended to see the impacts; agriculture has on the ecological system and the environment. In this segment, the results are not very encouraging, since the environmental impact generated by agricultural production obtained very negative results, such as the 6% reduction in forest areas from 1990 to 2016 and the increase of bulk of greenhouse gases.

It has demonstrated that agricultural production in the region is diverse and complex, resulting from the traditions of each country, and is obtained at the cost of a partial ecological destruction and reduction of the rural population, which was reduced 10% in the period 1990-2018. Despite the environmental impact in Latin America, it is important to mention that the common interest of the region is to maintain its role as one of the largest food producers on the planet. The need to reconcile the nutrition of the inhabitants of the Earth and preservation of the environment was discussed as a pending task for the social actors linked to agricultural production.

Keywords: Production, Trade, GDP, Market, Latin America, Export, Imports, Environment, Land, Agriculture, Crops, Hectare, Rural, Livestock, Greenhouse and Population.

1. Objective

The general objective of this thesis is to analyze and understand the new territorial, economic, environmental and political dynamics of the Latin American region, generated because of the consolidation of the dominant agricultural production model of the last decades.

Also to evaluate the economic impact of the agricultural industry and government strategies.

The following are specific objectives:

- Analyze the role of Latin America agriculture in terms of regional GDP.
- Analyze the influence of exports and imports in the productive models of Latin America.
- Analyze the trade balance and its impact on the Latin American economies.
- Describe and understand the impact of traditional agricultural practices on the environment.
- Analyze some relevant aspects of agricultural production such as main export crops, cereals, agricultural raw materials, fruits and livestock.
- Identify the future challenges of Latin American agriculture in reference to the increase in world population and reduction of rural population
- Identify the greatest production capacity based on the amount of arable land and agriculture land.
- Describe the role of the private economic sector within the agricultural economy.
- Evaluate the generation of jobs in the agricultural sector and the wages allocated to its workers
- Evaluate the social and economic impact of illicit crops in Latin America.

These objectives will help us understand the current situation of the Latin American agricultural sector and identify possible solutions to the problems and challenges that the region faces in terms of agricultural production.

3. Results & Discussions

The purpose of the analyzes exposed in this thesis is to evaluate the productive processes in Latin American agriculture, describe some of the economic benefits that the agricultural sector can deployed for the Latin American population and also to understand some of the challenges Latin America faces in terms of environmental impact and rural population.

In order with the objectives of this thesis, it was necessary to examine the role of the agricultural economy of Latin America in terms of GDP. It was found that in Latin America the share of agriculture in regional GDP decreased between the years 2000 and 2019. According to the United Nations, this decrease is due to the growth of other economic sectors such as the manufacturing industry, the service economy and tourism. (United Nations, 2020)

In the theoretical part and in the results, some detail was given on the properties that make up the trade of agricultural products in Latin America. The productive growth of recent years in the Latin American agricultural sector has led to a significant balance of agricultural exports over other exports. Latin America has maintained the share of agricultural exports an average of 20% of total exports in the period between 1990 and 2018. Although it is true that agricultural productivity has improved, according to the FAO, this balance is largely due to the dependence that exists in some countries on the export of agricultural products (FAO, 2020)

Based on the investigation of this thesis, it was found that Latin America has a very stable trade balance since its agricultural imports still do not exceed agricultural exports. Agricultural exports in 2018 reached 219 billion dollars while agricultural imports were 75 billion dollars, this leaves a super habit of around 144 billion dollars. This allows the region a greater margin to negotiate trade agreements with other regions of the world.

Despite of this, the World Bank says that many of the agricultural exports in Latin America are extremely dependent on the largest economies in the world such as China, the USA and the EU, this dependence can keep agricultural exports with very low growth and limiting the regions to trade with other regions. (FAO, 2019)

Among the most exported products from Latin America, you can find fruits, cereals, raw material and livestock derivatives. Among the main exported fruits are; avocado, pineapple, mango, papaya and bananas.

There are also very important cereals such as rice, wheat and corn. Among the main crops, the most important is the soybean production that has grown in recent years. Going from 54 million tons in 1990 to 136 million tons in 2018. Which makes this crop the one with the highest productivity in the region. The livestock had a positive balance in recent years also with a total production of more than 120 million tons of meat in 2018 including the three most important meat segments Chicken, Pork and Beef.

All this variety of agricultural products exported, consolidates Latin America as one of the great generators of food in the world.

After analyzing the indicators and commercial performance, it was also sought to analyze some of the environmental impact factors generated by this agricultural productivity. Among these factors, it was found that the emission of greenhouse gases related to agricultural activity did not have a significant increase in recent years. To cite an example, the CO₂ emissions generated by livestock were 985 thousand GG in 2010, while in 2018 they reached 1,027,615 GG. Despite this, FAO concludes that 70% of CO₂ emissions in Latin American agriculture come from livestock. (Moreno-Moreno, 2018)

Among other points analyzed was the reduction of forest areas between 1990 and 2016, between these periods the forest areas of Latin America were reduced by 6%. This reduction was verified under a regressive analysis that resulted in the relationship between the growth of agricultural land and the decrease of forestland. If the reduction of forest areas continues, this could put more risks on ecosystems in Latin America.

Other direct impacts generated by agricultural production in Latin America, is focused on the rural population. This population segment was affected in recent decades by the lack of organization and participation of the rural population in the productive sectors of agriculture. According to the World Bank, the rural population in Latin America represented 29% in 1990 and in 2018; it barely reached 19%, this despite the growth of agricultural exports.

In the theoretical part, the plans for 2030 were conceived in terms of food production worldwide, where it is believed that Latin America leads the production; this fact has a very bad contrast with the decrease in the rural population, since if the reduction of the population follows the same trend. Latin American governments would be approving the concentration of productive lands on the large economic sectors.

Among the factors that were reviewed that influence the productive sectors of agriculture in Latin America are illicit crops. This scourge only applies to a few countries in the region such as Colombia, Mexico, Peru

and Bolivia. Among the data found, it could be observed that the production of coca leaf has grown by around 130 in the last 8 years. These illicit crops are occupying 255 thousand hectares of arable land that can be used for the cultivation of other products. This growth is due to the abandonment of these rural areas and in another case, such as Bolivia, direct government support for coca leaf producers.

The social impact of these illicit crops is significantly negative for agriculture and for the rural population. This is also an important factor in the reduction of the rural population and the low productivity of some regions of Latin America.

According to FAO, if the peace process with the Colombian guerrilla FARC and the government ends in a positive way, Colombia could recover around 22 million hectares of arable land, which could generate a great increase in agricultural productivity in the region. (FAO, 2017)

To sum up, the causes and factors, which influence the productivity of the agriculture in Latin America, must be addressed individually and simultaneously. The factors are numerous and complex but with high possibility to be solved, in order to achieve the conditions so that agriculture can fully perform its essential functions and vigorously manifest its true potential. Similarly, the current productive balance allows us to continue to trust the productivity of the Latin American agricultural sector.

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