

**CHAPTER 2: AGRICULTURAL ECONOMICS IN THE ECONOMIC THINKING OF SUSTAINABILITY**

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**2.1. Introduction**

The multiple methods of scientific research lead to new inquiries into structural cuts based on macroeconomic theory and non-structural ones, reflecting the properties of time series, space and the organization of society and its individual behavior.

The choice of the cut of the analysis depends on the object, goals and objectives of the investigation itself. In this way, it is evaluated from the point of concentration on the methodology for carrying out a work of human and social thought. This evaluation investigates the different phases of research, location, population, sampling, actors, scientific instructions, expected results of the work, control and production systems (Fusco, 2021; Ghimire et al., 2021; Vergara-Romero, 2019).

Depending on the use of the methods or their convergence, continuity should be preserved until the end of the investigation, where it is expressed in the similarity of the main criteria indicators: Volumes of resources involved, proportion of finished products of a raw resource or net, income, earnings, profitability, among others (Mesa-Vásquez et al., 2021).

The basis of the research methodology is a determining factor in all scientific work, which is why research in the complex scientific discipline of agricultural, agro-industrial and agricultural economics is analyzed by sections of analysis and behavioral inquiry. The results of scientific investigations are mostly of theoretical foundation, manifestation of laws and economic patterns. Under these results, virtual development models are reached with a given direction and expected results supported by a theoretical basis.

The scientific news is in scientific bases that integrate these economic laws and patterns in data that need to be shaped for a more real adjustment that leads to the satisfaction of all the actors related to research in the fields of agriculture and economics.

Agriculture and the economy—linked by their way of producing and distributing on a basic level—are considered fundamental to societies, since they feed on these two converging scientific fields. The conceptual evolution of both disciplines leads to a reflection of the emerging changes with the passing of time and the decision to increasingly analyze the geographical space, which is linked to cultural identity and ancestral practices.

In this way, the agrarian economy is analyzed as a sphere of production with importance in agricultural products, increased food and environmental security, employment and income earning. The aim of the study is to expand on the modern context of agrarian economics in economic thought from a sustainability perspective.

### **2.2. Materials and methods**

To meet the objective of this research, a documentary or non-intrusive analysis was carried out, using scientific articles included in indexed journals with the search terms: "agrarian AND economy", "sustainability", "economic AND thinking", "agricultural AND economics", "economic AND thinking" and "sustainability". The search was expanded to the Journal Indexing Citation Report (JCR) and Scimago Journal Rank (SJR). In the case of Web of Science, the Social Sciences Citation Index (SSCI), Science Citation Index Expanded (SCIE), Art and Humanities Citation Index (AHCI) and Emerging Sources Citation Index (ESCI) were included.

Several articles were selected from 2000 to 2021, for a preselection focused on addressing the problem by reading the title, theme, abstract and keywords. A bank of articles was created on the Mendeley platform and the analysis of these articles was expanded, building a systematization of the indicated field and a comparative analysis between the various studies.

The systematization was carried out through the conceptual representation and the discursive analysis of each author. However, the relevance of the article is measured by its impact factor and immersion in the thought of its scientific discipline, oriented towards the results of substantial changes in praxis and the formative theory of the search for real solutions in multiple problem situations.

### **2.3. Developing**

Since ancient times, leading thinkers, writers and politicians have tried to solve economic problems linked to development. Economic thought and its evolution go hand in hand with the development of human beings and society. Therefore, it can be said that the economy has evolved over many centuries and at each stage of development, it was determined by its productive forces such as the form of agriculture and the nature of production relations (Candemir et al., 2021; Ramos-Leal et al., 2021).

Each stage of development of society has its own relationship of development, organization of production and categories of use of the main elements of the economy: land (natural resources), work (labor) and capital (money, fixed assets), entrepreneurship and science.

Since the 19th century, peasants have been the subject of debates, where different representatives of civil society and political subjects have a common issue: land ownership, being a recursive discourse in social life and programs for public policies that manage the welfare of the society of a specific territory (Ortega-Santos et al., 2021; Vergara-Romero & Rojas Dávila, 2019).

Despite the large number of publications, the understanding of history is revitalized in the different ways of management, organization and agricultural production. Each conceptual genesis was taken within the ideological context of the time, where the bases for statistical studies in the 20th century are established. In each stage of the development of society, social scientists expressed their economic points of view, theories on the organization of the State, production and labor relations, always leading a hegemonic thought that undergoes only slight transformations (Augeraud-Verón et al., 2021; Vergara-Romero & Moreno Silva, 2019; Zhu et al., 2021).

From the political economy framework, classical theory claimed the universality of its laws and, from this position, the existence of an agrarian (not to mention, peasant) economic theory could be questioned (Viaggi et al., 2021). The sources of agrarian economic theory are the observations of the economic reality produced by farmers and the discourse about peasants within the framework of management and public discourse (Durham & Mizik, 2021).

The agrarian economy, from its beginnings, was of an organizational and productive nature, since its vision was the search for the laws of the rational organization of agricultural companies or agricultural management, where the subject and object of study are these companies, including those led by the effects of globalization (Li & Cheng, 2021). Similarly, nature and the peasant community were seen from a purely theoretical point of view, studying certain general conditions of their existence and the practice that actually occurs in the process (Kharkwal et al., 2021) as a phenomenon.

It is remarkable to describe the traditional peasant community as vital and long-lived due to its ability to adapt and its dualistic nature, which includes a closed system of self-government, whose function is to make priority and rapid decisions for a well-defined geographical space. The community contains in its structure a set of simpler elements and relationships of all future social structures, based mainly on private property and also on public property (Adams et al., 2021; Josephson & Smale, 2021).

Under these circumstances, a community can live under different social systems, with private property becoming a fundamental element. It is this property, the socioeconomic compatibility of the community with any environment, which orients the adaptability of systems that can benefit its territory. The internal powers of this environment are life, conservation and development, as a goal to reach full well-being (Klerkx et al., 2019; Pozo-Estupiñan et al., 2021; Sed'a et al., 2021).

The community structures will be fully developed from the internal predispositions of the community, the nature and degree of development of the historical environment in which this community and territorial association lives, directly or indirectly. This implies the theoretical and real possibility of turning the stages of social development and shortening a development path (Tsiouni et al., 2021).

The advance of thought led to an understanding of the differences in the market and agricultural economic structure, termed as a populist agricultural economy. Noting that the peasant, in the first place, is not oriented to the market, but with another scale of evaluation of profitability (Girón & Correa, 2020). The regulator of the agricultural economy is the needs of the consumer, which includes feelings of joy, discontent, sufficiency or poverty according to the demands of the individual, from the horizon of their true and imaginary needs (Dobson et al., 2020; Márquez, 2021).

The academy and modern theoretical principles highlight the importance of learning in university classrooms, since it could have negative consequences in the economy, in the preparation of agricultural economists, postgraduate students, young scientists and international cooperation. These consequences can lead to a lack of interest in financing research projects and specialized studies in this field, resulting in a loss of competitiveness in the general economy of certain countries (Wang et al., 2021).

Also, the evolution of economic thought of the agrarian economy describes that this is not an ordinary sectorial science but a special section of knowledge created from a combination of factors, processes and agrarian relations. It is important to highlight that the agrarian economy, in order to be approached in a comprehensive manner, has to evaluate the problems of the industry and the real life of the entire civil society (Du et al., 2021; Souto-Anido et al., 2020).

Agrarian economic theory is designed by concept to solve problems related to the economy and agriculture, emphasizing its objective of formulating laws, economic categories and their definitions. Its theme is objective agrarian relations for future developments in the agrarian sector, where natural factors play a significant role, both in the strict and broad sense, consisting of foundations and applied issues (Malorgio & Marangon, 2021; Staton et al., 2022).

We can understand that the evolution of economic thought is due to factors of change in society, where changes in agriculture are evident. The most practical example is a society with subsistence agriculture which has a subsistence economy. If we analyze time as a variable, we can see how a society with traditional agriculture can evolve into a traditional economy.

Economic thought incorporates time as a variable, as changes in society are continuous. If we analyze agrarian economy as a commercial agricultural model that encompasses the world, then we come to the concept of multifunctional agriculture, developing rural economic thought. By analyzing time, we can also analyze territorial economies for a breakthrough in peri-urban agriculture.

The variables of space and time rooted in economic thought trigger the comprehensive analysis of the evolution and behavior of societies. This type of analysis focuses on finding generic solutions that can be applied to the majority of societies from different countries, in order to draft public policies with the particularities of each territory.

Agrarian economy is not only a complex production system, but also a special communal way of life. Its role lies in the methodological progress of science, the development of agrarian policy, social reforms of rural economic relations, and the unification of fundamental and applied knowledge (Amaro-Rosales & de Gortari-Rabiela, 2016).

Agrarian economic theory is the basis for the development of agricultural markets and more efficient models, and overcoming historical failures. This theory needs dynamism to improve government decisions with regard to subsidies, allocation of funds for the development of engineering and social infrastructure, and protection of the environment (Jenke et al., 2021). It is important to note that it joins all agricultural sciences, as a more efficient system that works on a common complex result (Loor et al., 2018; Vergara-Romero et al., 2020).

The issues of economic growth and overcoming the crisis in the agrarian economy, its stability and instability, continue to be studied in depth and are poorly used in the strategies and perspectives for the development of agriculture and its markets. The order of cycles and phases in the agrarian economy differs from that of the cycles of industrial production, and therefore, different economic measures and mechanisms for its regulation are required (Simionescu, 2021).

Likewise, creating reserve funds and improvements in agrarian science through public policies is relevant. Public policies should focus on results that encompass convincing, concrete proposals, tested by practice and optimized by economic and mathematical methods.

It is established that neoclassical thought focuses on the problems of valuation of natural resource markets, economic interaction in polluting the land, and the application of external effects regulated by the tax system to minimize negative externalities.

Keynesian theory analyzes the arguments of direct regulation of a State, together with the interaction between society and nature. These relationships, which are caused by the nature of society, establish that the Government should implement and control administrative instruments.

Neo-institutionalist theories consider integral solutions to environmental problems, through the strategy of changes in the behavior of civil society, the influence of the Anthropocene on the environment and the creation of new institutions within the state apparatus.

Agrarian economy is designed to monitor and critically evaluate the results of the implementation of agrarian policy, and to strive to create competitive methods to solve emerging problems (Nikol & Jansen, 2021). The tradition of agrarian theory and practice must continue to focus on the complex and simultaneous use of technological, economic, social and legal knowledge. At the same time, the potential for the development of the agricultural sector must grow, not only in technological or economic factors, but also in the legal sphere (Soto-Pinto et al., 2021; Vergara-Romero et al., 2021).

Historical circumstances and scientific advances have merged the agrarian economy with the industry, forming a powerful agro-industrial complex. It includes not only the multiple branches of agriculture and livestock, but also the industries producing agricultural

machinery, fertilizers, herbicides, transportation, storage, reprocessing, and business. Currently, the agrarian economy is linked mainly to the agro-industrial complex, based on large, closely interconnected, integrated and grouped social production (Graubner et al., 2021).

An isolated issue, but one that is gaining strength in contemporary times, pertains to the use of human resources in agriculture. Investments in human resources are effective and alleviate the unresolved problems that revolve around the loss of rural population through intensive migration, automation, robotization, intellectual property and creative property (Nowak et al., 2021). It is also essential to point out that a farmer should not be a temporary worker, but should be a highly qualified specialist who lives in the countryside, is healthy, family-oriented and motivated, and leads a healthy lifestyle (Ma et al., 2021; Mier and Terán Giménez Cacho et al., 2018).

When it comes to human capital, its development implies a person's acquisition of new skills that contribute to an increase in labor productivity for the individual and the collective. These include learning basic professional knowledge and skills in the vocational education system (Nguyen et al., 2021).

From the moment production work starts, there is a development of previously acquired qualities, knowledge, skills and abilities. This process continues throughout life through continuing education and production experience (Márquez-Sánchez & Sorhegui-Ortega, 2021). Human capital, acting as an active component of the industry, can not only increase the level of its own capitalization, but also acts as the main factor ensuring the preservation, effective use and increase in the level of capitalization of the entire agricultural production system and rural area as a whole, at the owner, rural household, organization, industry, region or country levels (Song et al., 2021).

In agriculture, the process of development of human capital and the industry are interdependent (Ezquerro et al., 2014; Georgios et al., 2021). The development of rural human capital implies the development of science and new technologies, which also implies the need to broaden and deepen the modern requirements for the development of production.



The system of development of rural human capital is a set of interconnected processes, objects, phenomena that lead to the development of the qualitative skills of the individual used to generate income (Candemir et al., 2021; Llinas et al., 2021; Hanclova et al., 2021). This system is characterized by the presence of stable relationships between elements and groups of elements, dealing with information flows that allow elements with different functions, tasks and coordination of their actions, to achieve their objectives.

In relation to the problems of rural human capital, it is possible to systematize the factors of its effective accumulation (production), circulation and use. The initial accumulation of human capital takes place in a sociocultural environment, whose basic unit is the family. It is precisely from the family that a person takes values that will be basic throughout their later life (Marston, 2021).

The formation of future rural human capital is influenced by the school, the parents and the social environment. The promotion of a healthy lifestyle, the need to receive education and the accumulation of their professional and cultural potential determine the motivation of the child to make constant and determined efforts to climb the social ladder (Noboa-Salazar et al., 2021). The quantitative and qualitative characteristics of human capital in agriculture are formed under the influence of many conditions and factors that, in their cooperation, determine the quality and synergy not only of rural human capital, but also of the region's agriculture as a whole (Baylis et al., 2021; Castellanos Dorado et al., 2021; Pulina et al., 2018).

These parameters of rural human capital are established within economic thought from an economic conception of development, oriented to the human dimension and the rationality of human societies, directing the course towards an environment of equity, social justice and sustainability. This proposal for sustainable human development begins with the exploration of a profound environmental and social crisis, made up of programs that maximize economic and profitable gains.

From the academy and its discourse, human development is analyzed from the dimensions of equity, sustainability, productivity, empowerment, cooperation and security. These dimensions must have a holistic and guiding vision that takes into account the demands of a political, economic and social nature.

Great changes are reflected in the way international organizations make pacts between states. A long-lasting and established document of this nature is the Sustainable Development Goals, which are incorporated into development actions and seek a fair, inclusive, equitable and sustainable society, where its key vision lies in human progress and human capital.

To elevate economic thought, three aspects of the new rurality should be taken into consideration: economic activities, the community and organizations, and its relationship with the urban. Also, human development, democracy, citizen participation, sustainability, welfare processes, and social capital at the local and national levels, must be taken into account.

### **2.4. Final thoughts**

By way of conclusion, we can summarize this essay by saying that, in the history of economic thought and analysis, agriculture at the dawn of production relations is considered an economic activity superior to the others, as it provides the population with the elements they need for nourishment, as proposed by the physiocratic school of thought. Later, with the development of industry and markets up to the technological development and globalization processes of present times, the importance of the agricultural sector changed, both in theory and in practice. Therefore, its role and specific influence in public policies has also changed.

The purpose of this work was to present methodological and theoretical considerations from a broad view of economic theory, which allows us to present elements that contribute to drafting or improving public policy proposals for agricultural activity. These public policies have to respond to new roles, complemented by global politics, and command a restructuring of institutions in the agricultural sector.

However, the institutional composition and its operation with the real agricultural sector must be more evident when creating, maintaining, modifying and evaluating an agrarian public policy, leading to further collaboration of all spheres of the sector.

The purpose of agrarian policies does not have to be limited to the generation of microeconomic and macroeconomic data, but rather, to seek partial solutions that integrate the total well-being of the urban and rural population, the latter being the most benefited due to its scope in rural, urban and peri-urban areas.

It is necessary to make large change in the country's agri-food system to solve the problem of hunger affecting a significant percentage of Ecuadorians, including hundreds of children suffering from malnutrition. It is, therefore, necessary to increase agricultural productivity and sustainable food production through public policies that lower the risk of hunger.

Finally, it is necessary to design public policies, to address the process of productive reconversion, the modernization of traditional crops, food security, food sovereignty, and the definition and implementation of ad-hoc public goods for agriculture. It is also necessary to have a healthy balance between the urban and rural populations.

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