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“THE POTENTIAL OF MEDICINAL AND AROMATIC PLANTS IN THE MALËSIA E MADHE REGION (ALBANIA)”: A TERRITORIAL INNOVATION APPROACH

Abstract. This research examines the concept of territorial innovation on the medicinal and aromatic plant sector in rural areas. Territorial innovation has tremendous potential to improve competitiveness, employment, and well-being in these regions. The medicinal and aromatic plant sector is significant in the Albanian economy, offering great opportunities for exports and serving as an important source of traditional medicines. In rural areas, territorial innovation can influence the medicinal and aromatic plant sector in several ways. Enhancing technology and production methods can increase the efficiency and quality of medicinal and aromatic plant production, making it more competitive in international markets. The utilization of new marketing and trade tools can facilitate entry into international markets and attract new customers. Collaboration and coordination among various stakeholders in the rural area can also be enhanced through territorial innovation.

Keywords: territorial innovation, rural areas, medicinal plants, environmental services, economic development.

Introduction

Malësia e Madhe Region is an important rural area in Albania, with significant natural resources for the development of the medicinal and aromatic plant sector. Agriculture is a key activity in this area, and the production of medicinal plants is gaining attention from specialists.

The production of medicinal plants in the Malësia e Madhe Region can be considered a traditional activity in this region and has been consolidated in several villages. Medicinal plants such as wormwood, gentian, parsley, and red flowers are produced in the Malësia e Madhe Region. These plants have wide usage in traditional medicine and have significant potential in international markets.

In this area, producers of medicinal plants are benefiting from the assistance of specialists and organizations that promote and develop this sector at the national and international levels. In this way, they are changing their traditional production methods and using new technologies and more efficient methods to produce medicinal plants with higher quality and lower costs.

To become more competitive in international markets, producers of medicinal plants in the Malësia e Madhe region can utilize new technologies and improve their marketing and trade methods. By doing so, they can change their marketing tactics and find new customers in international markets.

Overall, the production of medicinal plants is a sector with great potential in the Malësia e Madhe Region and throughout Albania. If medicinal plant producers employ territorial innovation technologies and methods, they can increase their efficiency and competitiveness in international markets and contribute to the development of rural areas.

In the Malësia e Madhe Region, according to studies conducted by local institutions and experts, the cultivation of medicinal plants is an important activity for several villages and is gaining increasing importance in the local economy. These plants have been traditionally used for medicinal and aromatic purposes and have significant potential in international markets.

Local government units for planning purposes are divided into territorial systems as follows: natural, agricultural, urban, water, and infrastructure.

- The natural system is the dominant system in the municipality's territory, particularly in the northeastern and southeastern parts, mainly in mountainous areas, covering a total area of 77,293 hectares.
- The agricultural system is characteristic of this territory, as it is spread throughout the municipality, concentrated in the plain area but also extending into mountainous areas. With agriculture being one of the priority sectors for development, its presence covers approximately 15,000 hectares.
- The urban system covers an area of 3,570 hectares. This system has undergone significant changes since the 1990s due to migration from isolated mountainous areas to areas closer to the town of Koplik and other areas with more employment opportunities.
- The water system covers an area of 600 hectares, including rivers, streams, reservoirs, and a large area of Lake Shkodra.
- The infrastructure system occupies an area of 256 hectares in the territory. This system includes road transportation, railway, water supply network, irrigation canal network, electricity network, telecommunications, etc.

The Malësia e Madhe Region rank first in terms of the quantity of cultivation and gathering of medicinal plants, primarily due to the

traditions of the local inhabitants. Wormwood and lavender constitute the main business in the Malësia e Madhe Region.

The role of the territory innovation in the production of medicinal plants

Territorial innovation is a relatively new concept in rural development and has tremendous potential to improve the medicinal and aromatic plant sector. This type of innovation focuses on developing the potentials and resources of a region, using an integrated approach to enhance competition, employment, and well-being in these areas.

The medicinal and aromatic plant sector holds particular importance in the Albanian economy, being a significant source of traditional medicines and offering great export opportunities. In this regard, territorial innovation can influence the development of the medicinal and aromatic plant sector in various ways.

One of the key ways in which territorial innovation can impact the medicinal and aromatic plant sector is through the improvement of technology and production methods. In rural areas, the production of medicinal and aromatic plants can be slow and costly, making this sector less competitive in international markets. Enhancing technology and production methods can increase the efficiency and quality of medicinal and aromatic plant production, making it more competitive in international markets.

Another way that territorial innovation can impact the medicinal and aromatic plant sector is through the use of new marketing and trade tools. Rural areas may face difficulties in terms of accessing international markets and finding new customers. In this regard, territorial innovation can aid in the development of new trade and marketing channels, utilizing new technologies and establishing new connections with international markets. Another advantage of territorial innovation

in the medicinal and aromatic plant sector is the improvement of collaboration and coordination among different actors in the rural area.

Territorial innovation is a concept that involves the use of innovation in territorial development. The development of a territory and the role of business in innovation are closely intertwined. A thriving business sector can help drive economic growth and development in a region, while a supportive environment can foster innovation and entrepreneurship (Jana, K., et al., 2023).

One of the most significant impacts of territorial innovation in rural areas is the increase in productivity in the agricultural sector and the creation of new opportunities to boost profits and generate new jobs. Territorial innovation can help improve production technology, utilize information and communication technologies to enhance market access and connectivity, and employ new business strategies to increase efficiency and competitiveness.

Literature review

Territorial innovation systems involve interconnected enterprises in specific sectors, along with the appropriate suppliers and service sector, as well as a range of supporting institutions (Minga, A et al., 2023). In fact, it is simplistic to think that the production and dissemination of knowledge occurs through “simple probabilistic contact mechanisms.” The factors determining higher innovativeness in one area compared to another are, in fact, much more complex. Innovation plays decisive roles in the geographic transformation of economic activity (Storper & Walker, 1989). The factors determining higher innovativeness in one area compared to another are, in fact, much more complex. In addition to physical proximity, we must consider cultural proximity, meaning a sense of belonging to an area, the ability to interact with others, and shared values, which, in short, determine relational capital (Dedeire & Minga, 2021). And it is precisely

relational capital, composed of various forms, that comes into play. Another approach focuses on the process of capital accumulation in which territorial change results from the creative destruction and innovation tendencies of industries as they seek new spaces for investment, resources, markets, and growth (Storper & Walker, 1989).

The medicinal plant sector is a broad field of study that encompasses all aspects of medicinal plants, including classification, use, processing, their healing effects, and safety. K. Sathish Kumar and R. Gopinath (2011) have provided an extensive review of medicinal plants, including a description of their usage, quality, healing properties, and their impact on the human body. Manish Gautam and Shweta Sharma (2014) have focused on the antiviral properties of medicinal plants, including plants that have effects on different viruses such as herpes and HIV. Sanaa Rostami et al. (2017) have analyzed the role of medicinal plants in the prevention and treatment of chronic diseases such as diabetes, hypertension, and cancer.

SWOT Analysis of the Malësia e Madhe Region

The SWOT analysis is a method used to evaluate a municipality's competitive strengths and is a tool to help local authorities focus their resources on making the most of their territorial advantages and finding effective solutions to problems. This is done to achieve sustainable development and ensure adaptability over time.

Strengths refer to the natural assets and potential benefits of the municipal area, including landscapes, regional and international connections, favorable weather conditions, tourism potential, strong banking systems, investment opportunities, efficient municipal management, and social and infrastructural services.

Weaknesses are factors that hinder the city's growth, such as insufficient infrastructure, ineffective municipal management, complicated administrative procedures, and poor traffic control.

Opportunities can arise from national or international projects that create jobs and business possibilities, while threats may emerge from environmental issues or human resource limitations.

A SWOT analysis is used to identify and evaluate the competitive advantages and potential of the Malësia e Madhe Region. It also examines future development prospects in terms of supply and demand and identifies necessary actions to minimize the impact of threats. This analysis should not be limited to physical aspects but should also consider economic assessments related to quality of life, the environment, and investment climate, as well as the management of urban and rural areas, new challenges faced by local government, and the socio-economic context.

Conclusions and Recommendations

The level of technological advancement is low in the farms of Malësia e Madhe. As a result, they require a high labour intensity. A significant proportion of these farms have outdated machinery, as well as inadequate agricultural buildings and storage facilities. The low capital turnover intensity from production has resulted in low productivity, relatively high production costs, low quality, and minimal profits.

In the Malësia e Madhe Region, there is no evidence of innovation in the sense of inventions, such as developing a patent and turning it into a business. However, there are cases of innovation related to the introduction of new management processes at the business level. Foreign buyers are a source of information not only for markets but also for technologies. Innovation in the medicinal plant sector in the Malësia e Madhe Region is essential to meet contemporary demands.

In the case of medicinal plants, there is a significant natural resource that is not fully utilized. To harness this resource to its fullest potential, cooperation with other parties and actors within the value

SWOT Analysis of the Malësia e Madhe Region

Strengths	Weaknesses	Opportunities	Threats
<ul style="list-style-type: none"> – Agricultural products in the flat and hilly areas that have a good market with specific regional advantages and optimal profit compared to other agricultural crops. – Suitable climatic and soil conditions for the development of medicinal and aromatic plant sectors, agriculture, and livestock based on macrozones suitable for agricultural and livestock production diversity. – The territorial composition of the municipality within the national framework provides an opportunity for supplying agricultural and livestock products to the municipality itself, partly to the Shkodra Municipality, and especially for meeting the needs and demands of mountain tourism and agrotourism in the Alpine region and its surroundings. – The structure of agricultural farm production is profitable and prioritizes the 	<ul style="list-style-type: none"> – High fragmentation of agricultural land and insufficient infrastructure for agriculture. – Lack of agricultural and livestock trade structures in the municipality's territory. – A reduced number of collectors compared to the reserves of agricultural and livestock production in the municipality's territory. – Lack of knowledge about marketing, selection, packaging, and preservation of fresh and non-fresh agricultural and livestock products. – Weak irrigation schemes in the agricultural lands of the Malësia e Madhe Municipality, with only about 15% of agricultural land being irrigated. – Lack of equipment for collection, transportation, and processing of agricultural and livestock products, as well as processing points 	<ul style="list-style-type: none"> – Favorable climatic and soil conditions in the region's territory for the growth and cultivation of medicinal and aromatic plants, agricultural crops, and the breeding of small livestock. – High potential for increasing the production of agricultural and livestock products, medicinal and aromatic plants, chestnuts, and tobacco as a result of the region's good traditions. 	<ul style="list-style-type: none"> – Non-functioning water canal network throughout the municipality's territory. – Risk of flooding in some flat areas of the municipality as a result of the malfunctioning drainage system. – Risk of non-trading and overstocking of key products due to non-functional contractual agreements with domestic and foreign markets.

<p>cultivation of crops suitable for the available land qualities, climate conditions, and grazing of livestock, for both the flatland and fruit tree areas, vineyards, and small livestock in hilly areas.</p> <ul style="list-style-type: none"> - The beginnings of interest group organization in the medicinal and aromatic plant production sector and the development of this sector as a priority in the municipality's agricultural structure. - Stabilization of the population over recent years, especially when compared to the significant depopulation of the 1990s. - Strategic position of the Malësia e Madhe Municipality: presence of Lake Shkodra and the Albanian Alps, proximity to the cities of Shkodra and Podgorica, and three border points with Montenegro. - Existence of old villages and the preservation of unique characteristics of village formation, traces of old fortifications, and cultural heritage sites. 	<p>for agricultural products, as well as rural roads connecting production centers with urban centers and mountain tourism and agrotourism points.</p> <ul style="list-style-type: none"> - Still weak organization of the community of agricultural and especially livestock collectors in the municipality's territory. - Construction not based on plans, resulting in a questionable aesthetics of the area alongside legal informality. - Deteriorated village connections that hinder development and lead to isolation. - Unresolved property registration issues that impede development. - Lack of social and cultural activities, especially in rural areas. - Seasonal and short-term tourism. 	<ul style="list-style-type: none"> - Increasing demand in both domestic and foreign markets for products from the municipality's territory. - Sufficient and supportive human capacities for increasing local production.
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chain is necessary. These actors need to be analyzed to identify the best varieties that offer better quality, lower costs, higher prices, a better image of the final product, and sanitary conditions within the allowable processing standards.

The increasing demand for medicinal and aromatic plants poses a challenge for the industry producing these plants, which must manage the quantity required while maintaining quality. Cultivating and growing medicinal plants requires dedication for long-term success and assurance of their sustainability.

In Albania, medicinal plants are an important source of traditional medicine and have been used for centuries as remedies for various ailments. In recent years, there has been a growing interest in and use of medicinal plants worldwide, and Albania has the potential to produce high-quality medicinal plants for export to international markets.

However, the medicinal plant sector in Albania faces several challenges and difficulties. Some of these challenges include:

- The lack of investments and financial resources for the development of the sector;
- The absence of a clear strategy for the development of the medicinal plant sector;
- The lack of an appropriate system for licensing and registering medicinal plant products;
- The absence of modern processing and production technology and equipment for medicinal plants;
- The absence of a specialized center for processing and analyzing medicinal plants.

One of the main challenges for cultivators and processors of medicinal and aromatic plants has long been the need for larger storage facilities to protect the plants from contamination, which reduces their quality and value in the market.

More investments are needed and expected in this sector in the future, especially in equipment for drying, cleaning, distilling, and packaging medicinal plants. Additionally, interventions are required to improve technology and enhance market access, market identification, and negotiation strategies for market entry.

The Malësia e Madhe Region has a high potential for improving the performance of the medicinal plant sector, considering its climate and geographical characteristics. This area has a favorable climate for growing medicinal plants, with ample sunshine and regular rainfall. At the same time, the Malësia e Madhe Region boasts rich biodiversity, including a wide variety of endemic and rare plants that have been historically used for medicinal purposes. Moreover, this region has a rich tradition of using medicinal plants by the local population and a large number of traditional healers involved in processing and distributing plant-based products.

If this potential is effectively utilized, the medicinal plant sector in the Malësia e Madhe region can grow significantly. Some steps that can help improve the performance of this sector in the Malësia e Madhe region include:

- Identification of important medicinal plants that can be successfully cultivated in this region;
- Building the capacities of local producers to prepare them for the medicinal plant market at both local and international levels;
- Promotion of the medicinal plant sector at both local and international levels to increase demand for products from this sector.

Establishing processing and distribution networks for medicinal plant products to ensure a sustainable and secure market for local producers.

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