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**Increase of Production Capacities and Investments  
in Enterprises Depending on the Perspective  
of Regional Development**

Marinela TENEQEXHI<sup>1\*</sup>, Klaudeta MEROLLARI<sup>2</sup>,  
Eleni VANGJELI<sup>3</sup>, Anila MANÇKA<sup>4</sup>

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**Abstract**

*Through this study, regional producing potential was identified based on investments and increase of capacities in order to determine their impact on increase in employment, mainly qualified and university graduate employees.*

*A few questions that arise along the study are: Does the production capacity affect the number of employees? Does the investment amount affect the number of employees? Does the increase of production capacity affect the increase of incomes? Does the increase of incomes affect the employment levels?*

*In conducting the study, we used secondary data published by INSTAT, the Regional Tax Office, municipalities in the Korca region, and primary data obtained through questionnaires filled out by regional enterprises.*

*Data processing revealed that 33% of respondents' businesses invested in the last 5 years in expanding their activities. As results of the investments made in 40% of businesses, the number of employees has increased by over 20. Despite the internal sources and credit, 30% of businesses chose the government subsidies as an investment method. Due to investments, business incomes increased by 20%. About 33% of businesses plan to increase their investments in the future. The production capacity, investment amount, and increase of income have statistically affected the employment levels greatly. Increase of production capacities has a statistically important effect on incomes. This study will open the doors to other processes in the area. The results achieved will serve as data for the regional institutions, the university, etc.*

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<sup>1</sup> "Fan S. Noli" University, Korçë, Albania, mteneqexhi@unkorce.edu.al.

\* Corresponding author

<sup>2</sup> "Fan S. Noli" University, Korçë, Albania, kmerollari@unkorce.edu.al.

<sup>3</sup> "Fan S. Noli" University, Korçë, Albania, evangjeli@unkorce.edu.al.

<sup>4</sup> "Fan S. Noli" University, Korçë, Albania, amancka@unkorce.edu.al.

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**JEL Classification:** D25.

## **1. Introduction**

In the last period, Albania has been affected by a wide wave of emigration. Emigration has particularly affected young people, who immigrate for reasons of employment and higher income. As a result of the youth and qualified class drain, Albania is thus losing its human capital, i.e. the labour force with high productivity. Under these conditions, increasing the level of employment, income from labour, and standard of living can be methods for improving the current situation. An important source of economic growth and job creation are the manufacturing enterprises, which contribute directly to regional and national economic development. The increase of the capacity and income of the manufacturing firms through the increase in investments, will have a positive impact on the economic development, affecting the curbing of the emigration of young people. The focus of our study is the identification of the production potential of the Korca region based on the increase in production capacity and business investments, which affect sustainable regional development. Also, the study identifies the effects of increasing production capacity, employment, and income.

## **2. Problem Statement**

In order to meet the objectives of the study, we analysed such variables as production capacity, investments, number of employees, income from investment, etc. Also, we studied the effects of such variables on businesses outcomes, which in turn affect the regional economic development. Our research in this field of study concluded that the literature on this aspect is too limited. Some of the outcomes achieved by studies conducted in this area are listed below:

Manufacturing has traditionally played a key role in the economic growth of developing countries. On the basis of this fact, the research (Nobuya Haraguchi et al., 2016) in their study has explored whether the low levels of industrialisation in developing countries are attributable to long-term changes in the development characteristics of manufacturing or to the manufacturing sector's general global prospects. Lastly, its findings have resulted in a concentration of manufacturing activities in developing countries.

K. Fedorowicza and A. Łopatka (2022) have stressed the importance of investment in the development of enterprises in Poland. They have confirmed the theory that investment is a principal factor for companies to make profits. The results of their study show that investment is an important factor in economic growth because it leads to a better use of resources for which economic entities compete in the free market.

Montolio and Sole-Olle (2009) and Bottasso et al. (2014). argue that the rate of acquisition and adaptation of new equipment and machines are manifested in

investments by firms. Furthermore, investment in infrastructure and fundamental industries by states induces the adaptation of better technologies by firms.

Hongh Chen et al. (2018) in their study investigate the impacts that investments have on technological progress, particularly from a developing country perspective. Their findings complement the empirical literature by showing that private domestic investment has a consistent and positive impact on technological progress.

Dommari Anjaneyul et al. (2023) have found a very strong positive Association between Number of employees and Annual Revenue of the company. The results of their study show that when Employees of the Company increases during the years, in the same way Annual Revenue also increased.

(Heshmati & Löf, 2008) provide an empirical analysis of the two-way causal relationship between investment and performance indicators at the firm level. The performance variables include sales, value added, profit, cash flow, capital structure, and employment. The results show evidence of a strong and significant relationship between R&D and productivity. R&D is found to be a good predictor of future growth in profit and employment.

Oluchukwu et al. (2019) have estimated a dynamic model with error correction using data from Nigeria between 1980 and 2017. Their finding results that investment is capable of creating opportunities for employment thus reducing the level of unemployment in a developing economy.

Mutunga& Owino (2017) have studied the relation between production capacity and financial performance of manufacturing firms in Kenya. They have collected data using a self-administered questionnaire, from a population of 180 manufacturing firms in Kenya. The study concluded that there is a positive relationship between production capacity and financial performance of manufacturing firm.

Abu Jadayil et al. (2017), determine the main factors affecting its production capacity, and study their influence to improve the production capacity to reach the optimum. Different aspects were investigated, including the speed of the running machines, the number of workers running each machine, the operating shifts, the machine utilisation, and the working environment. It was found that all these factors have significant effect on improving the production capacity.

Jamaliah (2016) demonstrated in his study that private investment had a significant effect on production added value, with a positive relation; private investment had a significant effect on employment absorption, with a positive relation; production added value had a significant effect on employment absorption, with a positive relation.

Our study is only the beginning of studies to identify producing potentials regarding increased capacity and employment as basis for regional development. Since the paper aimed to study only a few affecting variables, future studies could complete the results by extending the assessment to other affecting variables to increase the levels of explainability of used models and improving the assessment techniques.

### 3. Research Questions

The main objective of the study is to identify the region's producing potentials based on increasing capacities aiming at a sustainable regional development.

The following specific objectives are the focus of the study:

- To assess the actual situation of the region's producing sector related to the amount of total production provided and the employment levels;
- To assess the actual investments and those planned in the future related to increase of capacities, incomes and employment.

To meet the above objectives, a few research questions come up:

*Research question 1:* Does the amount of investment affect the increasing number of employed people?

*Research question 2:* Does the increase of production capacity affect the increase of incomes?

*Research question 3:* Do the increase of production capacity and incomes affect employability?

*Research question 4:* Do the increase of investments and production capacity affect the increase of incomes?

### 4. Research Methods

In conducting the study, primary and secondary data sources were used. The secondary data were obtained by: INSTAT, local institutions such as the Tax Office, municipalities of the Korca Region, providing the list of all businesses operating in the Korca Region. Only active businesses making up the study population were selected from the list (1550 companies). It is important to determine the sample, since it should be most representing for the population being studied. Keeping that in mind, the formula processed by Yamane (1967) was selected:

$$n = \frac{N}{1 + N(e)^2} \quad (1)$$

In this present study, since the population is made up of 1550 companies, the size of the sample is:

$$n = \frac{1550}{1 + 1550(0.1)^2} = 92$$

There were 105 producing companies involved in the study, since were considered that a lower return rate than 100% could exist. Business selection was done randomly from the list (1 in every 15 businesses).

The primary data obtained by questionnaires addressed to production companies from the Korca region. The questionnaires were physically distributed in selected businesses and the return rate was 100%. The data were collected during the period May-June 2023.

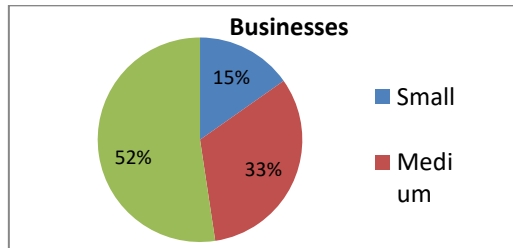
All data were analysed with Software EView 13. Primary data was displayed on tables and graphics through descriptive analyses. To test whether the independent variables included in the study statistically predict the dependent variables, simple regression and multiple linear multiple models were used.

## 5. Findings

### 5.1 Results of Questionnaire Processing

The study produced the following findings, after having processed and analysed primary and secondary data.

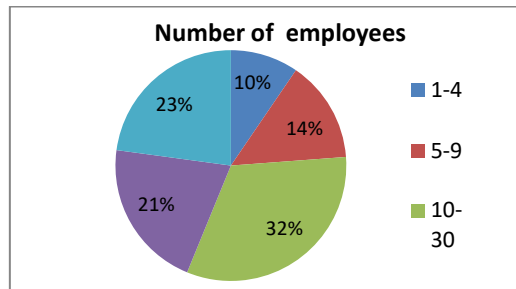
**Figure 1. Number of businesses by size**



Source: authors.

From the responses of the surveyed businesses, it appears that 52% of them are large businesses, 33% are medium-sized businesses and the remaining 15% are small businesses. The sample selected for the survey intentionally includes a high number of large businesses, with many employees, for the purpose of the survey and the implemented project.

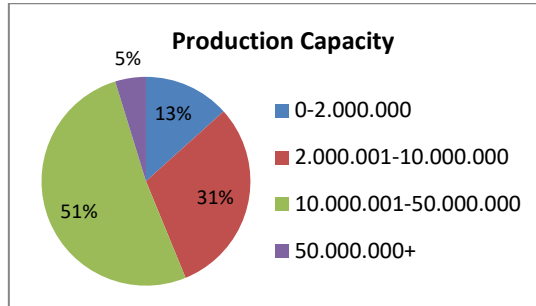
**Figure 2. Classification of businesses based on the number of employees**



Source: authors.

Regarding the number of employees in the surveyed businesses, it turns out that 10% of them have 1-4 employees, 14% have 5-9 employees, 32% of them have 10-30 employees, 21% of them have 31-50 employees and 23% have over 50 employees. The performance of businesses will affect directly the well-being of their employees, the increase of employees' numbers, as well as the improvement of employment and economic growth indicators in the Korca region.

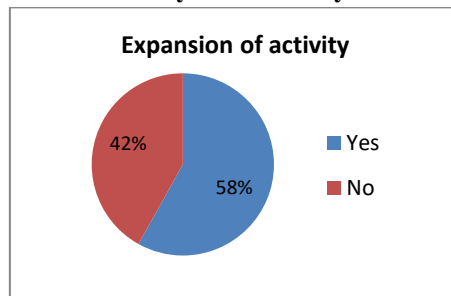
**Figure 3. Classification of businesses based on annual turnover**



Source: authors.

Regarding production capacity, most of the businesses asked (51%) have an annual turnover of 10,000,001-50,000,000 ALL, 31% have an annual turnover of 2,000,001-10,000,000, 13% an annual turnover 0-2,000,000 and only 5% have an annual turnover of 50,000,000+.

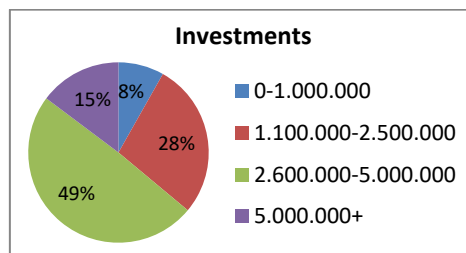
**Figure 4. Classification of businesses based on the expansion of activity in the last 5 years**



Source: authors.

Out of 105 businesses surveyed, 58% of businesses responded positively to the expansion of activity, while 42% do not want to increase their activity.

**Figure 5. Classification of businesses based on the amount of the investments**

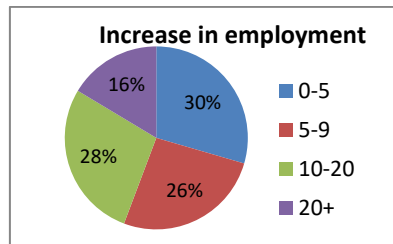


Source: authors.

The analysis of the questionnaires shows that 8% of businesses have invested up to 1,000,000 ALL, 28% of businesses have invested from 1,100,000 to

2,500,000 ALL, 49% of businesses have invested worth from 2,600,000 to 5,000,000, while 15% of businesses have invested in the amount of over 5,000,000 ALL. It turns out that most of the businesses in the Korca region have invested 2,600,000-5,000,000 ALL for expanding their activity.

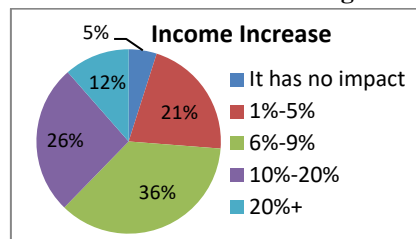
**Figure 6. Classification of businesses based on the increase of employment levels**



Source: authors.

Our study shows that 30% of businesses have increased the level of employment with 1-5 employees, 26% of businesses with 5-9 employees, 28% of businesses with 10-20 employees, and 16% of businesses with over 20 new employees, due to their investments.

**Figure 7. Classification of businesses based on the growth of investment income**



Source: authors.

Our study shows that investments had no impact on income increase for 5% of businesses, it had an increase up to 5% in income as a result of the investments for 21% of businesses, it had an increase up to 6%-9% in income for 36% of businesses, it had an increase up to 10%-20% in income for 26% of businesses and it had an increase in income by over 20% for 12% of businesses.

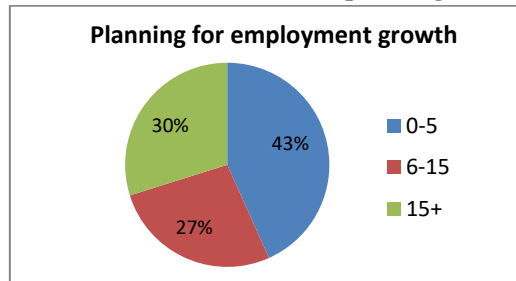
**Figure 8. Classification of businesses based on future investments**



Source: authors.

One of our study findings was how businesses will invest for technology in the future. As shown in Figure 8 there are: 34% of businesses will invest in new capacity-raising technologies, 40% of businesses will invest in new technologies to increase product quality, 23% of businesses will invest in technology for the production of a new product, and only 3% of businesses will make no investment for technology in the future.

**Figure 9. Classification of businesses based on planning for employment growth**



Source: authors.

One of the purposes of making investments is to increase employment. According to data from questionnaires, businesses have different plans for employment growth as a result of their investments. As it shows in Figure 9: 43% of businesses plan to increase the level of employment by 1-5 employees, 27% of businesses plan to increase the level of employment by 6-15 employees and 30% of businesses plan an increase by more than 15 employees as a result of the investment.

## 5.2 Regression Analysis

Some of the variables being analysed in the study are: investments, number of employees, production capacity, incomes. To analyse the relations between variables, we used the simple regression multiple linear analyses.

- Ho: The amount of investment affects the increasing number of people employed.

This hypothesis is proven.

Such model of simple linear regression presents the connection between the increase of employees' numbers and the investment.  $Y = -0.0817 + 0.9065X_1$ .

The model appears statistically important ( $t=32.25$ ;  $p<0.05$ ) with an explanatory strength of 90% ( $R^2=0.9$ ). The investments made in businesses have very important effects on the increasing numbers of employees.

- Ho: Increase of production capacities has statistically important effect on increase of incomes.

This hypothesis is proven.

Such model of simple linear regression presents the connection between the increase of incomes and the production capacity  $Y = 0.78 + 0.76 X_1$ .

The model appears to be important ( $t=7.48$ ;  $p<0.05$ ) with an explanatory strength 35% ( $R^2=0.35$ ).



The increase of production capacity affects the increase of incomes by explaining 35% of the measure of their change.

- Ho: The increase in capacity and the increase in income affect the increase of employment.

Thus, the hypothesis is proven.

Such model of multiple regression presents the connection between the increase of employment, capacity and incomes  $Y = -0.018 + 0.63 X_1 + 0.17 X_2$ .

The model appears to be statistically important ( $F = 615$ ;  $p < 0.05$ ) with an explanatory strength of 92% ( $R^2 = 0.92$ ).

Increase of capacity and incomes explain 92% of change in increase of employment.

The increase in capacity appears to have an important effect on employment ( $t = 22.7$ ;  $p < 0.05$ ); similarly, the increase in incomes results to have an important effect on employment ( $t = 8.06$ ,  $p < 0.05$ ).

- Ho: Increase of investment and increase of capacity affect the increase of incomes.

This hypothesis is proven.

Such a multiple regression provides the connection between increase in incomes, increase of investments and increase of capacity  $Y = -0.012 + 1.14 X_1 + 0.04 X_2$ .

This model appears to be statistically important ( $F = 1112$ ;  $p < 0.05$ ) with an explanatory strength of 95% ( $R^2 = 0.95$ ).

Increase of investment appears to have an important effect on increase of incomes ( $t = 37.5$ ;  $p < 0.05$ ), whereas the increase of capacity does not show an important effect on the increase of incomes ( $t = 1.28$ ;  $p > 0.05$ ).

## **6. Conclusions**

The study was conducted for the producing companies in the Korca region, because businesses contribute directly to the economic regional and national development and increase in employment. Large businesses make up almost 50% of the companies under study. These businesses also have a higher number of employees and greater opportunities to create new jobs in the future. About 33% of the participating businesses have invested in expanding their activities over the last five years. As a result of investments done in 40% of businesses, the number of employees has increased with more than 20 employees. A considerable part of businesses – 33% of them – plan to increase their investments in the future. As a result of future investments, the producing capacity for 40% of businesses is expected to increase by over 50%. Also, future investments are expected to increase the employment levels with over 15 employees and have more influence on the production quality for 50% of businesses. One of the reasons why other businesses have not invested and do not plan to do so in the future is the high interest rates on the loans. Therefore, government policies should aim at creating a favourable business environment whether new or existing ones, through subsidizing or facilities in order to encourage them towards investments.

As by the statistical analyses of variables under study, it was concluded that: investments done in businesses have an important effect on the increase of the employees' number. Similar results gave the studies from Jamaliah (2016), and Oluchukwu et al. (2019).

The increase in production capacity and the increase in income have a statistically important effect on increase in employment. Same findings obtained in their studies Mutunga & Owino (2017) as well as Dommari Anjaneyul et al. (2023).

The increase of investments and the increase of capacity have a statistically important effect on increase of business incomes. Such a finding is partially proved in the studies by Fedorowicz and Łopatka (2022) that investment is a principal factor for companies to make profits.

Increase of production capacity has a statistically important effect on increase in income. This finding is supported by Mutunga & Owino (2017) stating that there is a positive relationship between production capacity and financial performance of manufacturing firm.

We think that these outcomes are a contribution in the research field, leaving it open for researchers to continue their studies. This study should be extended in the future in a wider range of time in order to ensure the sustainability of the outcomes. The study served as a database for those people who are interested, such as company managers, regional institution directors, policy makers on local and central levels, and it would be worth it to deepen the study further in the future involving a wider business sample on national levels. Since the paper aimed to study only a few affecting variables, future studies could complete the results by extending the assessment to other affecting variables to increase the levels of explainability of used models and improving the assessment techniques.

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