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**DOCTORAL THESIS**

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Title of the doctoral thesis:

**MACROECONOMIC PROPORTIONS AND CORRELATIONS**  
**THE INFLUENCE ON ECONOMIC GROWTH**  
**LABOUR FORCE AND ECONOMIC GROWTH**

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## TABLE OF CONTENTS

<b>SUMMARY</b>	<b>5</b>
<b>INTRODUCTION</b>	<b>6</b>
<b>CHAPTER 1 – STATE OF KNOWLEDGE IN THE FIELD OF THE DOCTORAL THESIS</b>	<b>14</b>
1.1. Presentation in the Specialized Literature of the Relationship between the Labour Force and Economic Growth	14
1.2. Models for Analysing the Relationship between the Labour Force and Gross Domestic Product in the Specialized Literature	25
1.3. Remote Work and the Redefinition of the Labour Market and Macroeconomic Implications	29
<b>CHAPTER 2 – ANALYSIS OF THE LABOUR MARKET IN ROMANIA IN THE PROCESS OF SUSTAINABLE DEVELOPMENT</b>	<b>40</b>
2.1. Main Theoretical Aspects Regarding the Analysis of Labour Resources	40
2.2. Macroeconomic Aggregates Regarding Population, Labour Force, and Economic Growth	43
2.3. The Situation of the Structure and Distribution of the Labour Force in Romania	51
2.4. Labour Force Benchmarks by Territorial Profile	68
2.5. The Impact of the Transition towards a Digital Economy on Employees	82
<b>CHAPTER 3 – DIGITALISATION AND THE LABOUR FORCE IN EUROPEAN UNION ECONOMIES</b>	<b>96</b>
3.1. Comparative Analysis of the Distribution of the Labour Force among the Main Economic Sectors	96
3.2. Degree of Work Digitalisation and Productivity	110
3.3. The Role of Teleworking in the Context of Labour Market Digitalisation	124
<b>CHAPTER 4 – THE IMPACT OF REMOTE WORK ON KEY MACROECONOMIC PERFORMANCE INDICATORS</b>	<b>140</b>
4.1. Remote Work and Post-Pandemic Economic Correlations	140
4.2. Transformations of the Labour Market and the Economic Context in the European Union during the Period 2020–2023	143
4.3. Remote Work and the Level of Economic Development in the European Union: Comparative Analysis 2020 and 2023	177
4.4. Working from Home and Gross Domestic Product: A Comparative Econometric Approach for the European Union. Germany and Romania	193

<b>CONCLUSIONS</b>	208
<b>BIBLIOGRAPHY</b>	215
<b>WEB SOURCES</b>	228
<b>LIST OF TABLES</b>	230
<b>LIST OF CHARTS</b>	233
<b>LIST OF FIGURES</b>	235
<b>LIST OF ABBREVIATIONS</b>	236

**Keywords:** Gross Domestic Product, correlation, proportion, unemployment, inflation, economic growth, employed population, labour productivity, digitalisation, remote work, teleworking.

## **SYNTHESIS OF THE DOCTORAL THESIS**

The doctoral thesis entitled “Macroeconomic Proportions and Correlations. The Influence on Economic Growth. Labour Force and Economic Growth” addresses one of the central topics of contemporary economics, namely the role of the labour force in shaping macroeconomic performance, within a context marked by profound structural transformations of the labour market, accelerated digitalisation, and the expansion of remote work.

The motivation of this research stems from the need to understand the complex relationships between labour market indicators and economic growth, given that human capital, employment structure, and new forms of work organisation directly influence the competitiveness and sustainability of modern economies.

In this context, the thesis aims to analyse the existing proportions and correlations between the main labour force indicators and macroeconomic performance indicators, with particular emphasis on Gross Domestic Product and labour productivity.

The general objective of the research consists in assessing the impact of the labour force and remote work on economic growth, both in Romania and at the level of the European Union.

This objective is supported by a series of specific objectives, among which the following stand out: the structural analysis of the Romanian labour market; highlighting the role of digitalisation and teleworking in European economies; identifying statistical and econometric relationships between remote work and macroeconomic performance indicators; and conducting comparative analyses between the pandemic period (2020) and the post-pandemic period (2023).

Within the research framework, I sought to demonstrate the significance of applying statistical-econometric and mathematical models in the study of labour resources, with a focus on the opportunities offered by such systems of indicators for conducting complex and relevant analyses.

In order to highlight the role of econometric models, references were made to a series of concepts, methods, and models specific to disciplines such as statistics, macroeconomics, and econometrics, thus providing a solid theoretical foundation for the research approach.

The doctoral thesis entitled “Macroeconomic Proportions and Correlations. The Influence on Economic Growth. Labour Force and Economic Growth” is structured into four major chapters, combining the theoretical presentation of notions, methods, and statistical-econometric models drawn from national and international literature and adapted to ensure a

high degree of compatibility with the chosen research topic, together with a concrete analysis of correlations between various macroeconomic aggregates in Romania.

These are complemented by an introduction offering the general framework necessary for a comprehensive understanding of the thesis as a whole, and a conclusions chapter presenting the main theoretical and practical findings resulting from the research. The structure of the doctoral thesis is as follows:

- Introduction
- Chapter I – State of knowledge in the field of the doctoral thesis
- Chapter II – Analysis of the labour market in Romania in the process of sustainable development
- Chapter III – Digitalisation and the labour force in European Union economies
- Chapter IV – The impact of remote work on key macroeconomic performance indicators
- Conclusions

The first chapter presents the current state of specialised literature, highlighting the strategic importance of the labour force in the macroeconomic architecture, not only in terms of employment volume but, above all, in terms of the quality of human capital. Recent transformations accelerated digitalisation, the expansion of remote work, the green transition, and population ageing shape new labour paradigms and require adaptation of the institutional framework and public policies.

The analysis of macroeconomic indicators used in the study of population and labour force dynamics is the focus of the second chapter of this work. This section begins with a theoretical presentation of the main aspects concerning population and labour force, on the one hand, and economic growth, on the other.

This part of the thesis is particularly important as it allows the identification of the main elements characterising the labour market, serving as a realistic foundation for constructing statistical and econometric models through which the influence of these factors on the evolution of national or regional economic systems can be defined.

In the third chapter, the research aims to highlight, both theoretically and empirically, through the use of statistical and econometric models, the impact of the digitalisation process on the labour force in European Union economies, as well as the role of teleworking in the context of transformations generated by labour market digitalisation.

The fourth chapter addresses a topic of significant current relevance at the global level, namely the analysis of the impact of remote work and work from home on the evolution of key macroeconomic performance indicators.

The originality of the research lies in the integrated approach to the relationship between labour force, digitalisation, and economic growth, through the combined use of multivariate statistical methods and temporal comparative analyses.

The results obtained provide empirical support for the formulation of public policies aimed at enhancing human capital, reducing regional disparities, and stimulating sustainable economic growth, adapted to the new realities of the labour market.

In the concluding part of the thesis, a set of conclusions was formulated regarding the factors influencing economic growth, under the specific conditions of the current period experienced by Romania.

The results highlight that the labour force represents an essential determinant of economic growth, not only from a quantitative perspective, but especially in terms of human capital quality, education level, and adaptability to new technologies. In the case of Romania, the analysis reveals the existence of structural imbalances in the labour market, reflected in employment and productivity rates below the European Union average, but also a significant potential for convergence through investments in education, digitalisation, and active labour market policies.

In developing this doctoral thesis, an extensive number of bibliographic references from national and international specialised literature were used, especially articles published in journals indexed in Web of Science (Clarivate Analytics) or included in international databases.

Regarding the dissemination of research results, part of the outcomes of the doctoral training programme and, in particular, of the research associated with this thesis have been published in the form of articles in specialised journals indexed in international databases (76 articles).

At the same time, as a result of scientific research in the field, a number of papers were presented at international scientific conferences held both domestically and abroad, organised by higher education institutions, included in.