

Babeş-Bolyai University from Cluj-Napoca
Faculty of Economic Sciences and Business Administration
Doctoral School of Economics and Business Administration
Department of Accounting and Auditing

THESIS ABSTRACT

NATIONAL ACCOUNTS IN INFORMATIONAL MACROECONOMIC SYSTEM

Scientific coordinator,

Ph.D. Professor DUMBRAVĂ PARTENIE

PhD Student,

URSUȚ (married ILCA) MARIA

Cluj-Napoca

2014

CONTENT OF THE PhD THESIS' SUMMARY

1. KEY WORDS.....	3
2. THE CONTENT OF THE PhD THESIS.....	4
3. INTRODUCTION.....	8
4. REASONS FOR CHOOSING THE RESEARCH TOPICS.....	9
5. THE CURRENT STAGE OF KNOWLEDGE, NATIONAL AND INTERNATIONAL FIELD OF RESEARCH.....	10
6. SCIENTIFIC RESEARCH METHODOLOGY.....	11
7. BRIEF OVERVIEW OF THESIS CHAPTERS.....	15
8. GENERAL CONCLUSIONS, PERSPECTIVES AND LIMITS OF THE RESEARCH.....	19
9. SELECTIVE REFERENCES.....	33

1. KEY WORDS

National Accounts, National Account System, Informational macroeconomic system
Economic Science, Social Science, Statistical Technique, National Accounting
Social Accounting, Social Indicators, The accounting of the entity
Macro - accounting information, Harmonization, Normalized System
Macro-economic results, Budgets, Macroeconomic Assumptions
Macroeconomic analysis, Economic Circuit, Flows, Stocks, Principles
Institutional Units, Economic issues/topics, Institutional sectors, Branches of activity
Operations on goods and services, Distribution transactions, Financial operations
Aggregation, Aggregates, Macroeconomic indicators, Specific indicators
Regional accounts, Region, Disparities/Gaps between regions, Regional indicators
Method of least squares
Mathematical model to estimate GDP

2. CONTENT OF THE PhD THESIS

List of abbreviations

List of tables, figures, graphs and annexes

INTRODUCTION

Relevance, motivation and purpose of the research carried

Current state of knowledge, national and international researched domain

Research methodology

Presentation of thesis structure

CHAPTER 1 NATIONAL ACCOUNTS - LOCATION IN THE CURRENT STAGE OF KNOWLEDGE

1.1. National Account System - theory and social practice

1.2. The national accounts component of informational macroeconomic system

1.2.1. The place of N.A.S. under informational macroeconomic system

1.2.2. The relationship between accounting of the entity and national accounting

1.3. Preliminary conclusions

CHAPTER 2 FROM APPEARANCE AT CONTEMPORARY APPROACHES ON NATIONAL ACCOUNTING

2.1. Highlights that marks the emergence and development of national accounting

2.2. Contributions to the emergence and development of national accounting

2.2.1. In England/UK

2.2.2. In France

2.2.3. In United States of America/USA

2.2.4. In Romania

2.2.5. In other countries

2.3. Harmonization of systems for national accounting

2.4. Normalized system accounts ESA 1995

2.4.1. Normalized system accounts in France

2.4.2. Normalized system accounts in Romania

2.5. Preliminary conclusions

CHAPTER 3 GENERAL FRAMEWORK OF NATIONAL ACCOUNTS

3.1. Usefulness of the information provided by the national accounts

3.1.1. N.A.S. – basis of the analysis and determination of macroeconomic results

3.1.2. The use of information provided by national accounts economic in developing budgets

- 3.1.3. N.A.S. – source of information regarding the condition of economy
- 3.1.4. N.A.S. – tool for macroeconomic assumptions
- 3.1.5. Use the ESA 2010
- 3.2. The concept, classification of accounts and national accounting users
 - 3.2.1. Defining the national accounting
 - 3.2.2. Classification of National Accounts
 - 3.2.3. Users of national accounting
- 3.3. Objectives and methods of national accounting method
- 3.4. Terminology and rules for registration in N.A.S.
- 3.5. Economic circuit, object of N.A.S.
 - 3.5.1. Defining elements and components of the economic circuit
 - 3.5.2. Methods of presentation for flows and stocks in the N.A.S.
- 3.6. Principles of national accounting
- 3.7. Institutional units and sectors, branches of activity
 - 3.7.1. Institutional units and sectors
 - 3.7.2. Branches of activity
- 3.8. Structure of operations reflected in the national accounts
 - 3.8.1. Operations on goods
 - 3.8.2. Distribution transactions
 - 3.8.3. Financial operations
- 3.9. Preliminary conclusions

CHAPTER 4 CONTENT, CALCULATION METHOD AND ANALYSIS OF THE INDICATORS DETERMINED BASED ON INFORMATION PROVIDED BY NATIONAL ACCOUNTS

- 4.1. The necessity to substitution/replacement of aggregates determined in M.P.S. with those identified in N.A.S.
- 4.2. Macroeconomic indicators synthesized in M.P.S.
- 4.3. Methodology of drawing up the accounts and indicators in the N.A.S. and their analysis
 - 4.3.1. The characterization of accounts for economic issues and indicators determined based on the information they provide
 - 4.3.1.1. Indicators calculated on the basis of accounts regarding the company's activity
 - 4.3.1.2. Indicators calculated on the basis of accounts regarding to population households activity
 - 4.3.1.3. Indicators calculated on the basis of accounts regarding to activity of public institutions

- 4.3.2. Practical study relating to preparation of accounts for institutional sectors, their determination and analysis of specific indicators
 - 4.3.2.1. Elaboration of the accounts for institutional sector "Non-financial corporations" (S11), the calculation of indicators, rates, evolution and their analysis
 - 4.3.2.2. Indicators calculated on the basis of information from the accounts of institutional sector "Financial corporations" (S12)
 - 4.3.2.3. Indicators calculated on the basis of information from the accounts of institutional sector "Public administration" (S13)
 - 4.3.2.4. Indicators calculated on the basis of information from the accounts of institutional sector "Households" (S14)
 - 4.3.2.5. Indicators calculated on the basis of information from the accounts of institutional sector "Nonprofit institutions serving households" (S15)
 - 4.3.2.6. Indicators calculated on the basis of information from the accounts of institutional sector "Rest of the world" (S2)
- 4.3.3. Indicators reflected in macroeconomic accounts
- 4.3.4. Synthetic indicators for results calculated in national accounts system - doctrinal and practical approaches
 - 4.3.4.1. Gross Domestic Product and Net Domestic Product
 - 4.3.4.2. Gross National Product and Net National Product
 - 4.3.4.3. National Income
 - 4.3.4.4. Evaluation of indicators
- 4.4. Preliminary conclusions

CHAPTER 5 REGIONAL NATIONAL ACCOUNTS (RNA) AND REGIONAL INDICATORS – DOCTRINAL AND PRACTICAL APPROACH

- 5.1. Region concept, typology
- 5.2. Importance of drawing up for regional accounts
- 5.3. European System of Accounts methodology used in the elaboration for regional accounts
 - 5.3.1. General aspects
 - 5.3.2. Methods of regionalization
 - 5.3.3. Operations reflected in regional accounts
 - 5.3.4. Methodology of elaboration and utilization of for regional accounts in Romania
 - 5.3.4.1. Administrative levels to which regional accounts are prepared
 - 5.3.4.2. Regional accounts related to the institutional sector "Population Households"
 - 5.3.5. Estimation of regional aggregates by branches of activity. Calculation of RGDP in Romania

- 5.4. A model for estimating regional GDP using the method of least squares
 - 5.4.1. Presentation of the method of least squares
 - 5.4.2. Estimation of regional GDP based on the method of least squares
- 5.5. Measuring disparities/gaps between regions by indicators determined in regional accounting
 - 5.5.1. Analysis of gross domestic product and the added value
 - 5.5.1.1. Regional Gross Domestic Product (RGDP)
 - 5.5.1.2. Regional gross value added (RGVA)
 - 5.5.2. Analysis of primary income and net disposable/available income
 - 5.5.2.1. Net primary income of households
 - 5.5.2.2. Net disposable income of households
- 5.6. Preliminary conclusions

CHAPTER 6 GENERAL CONCLUSIONS, LIMITATIONS AND FUTURE RESEARCH

- 6.1. The general conclusions detached from the research
- 6.2. Limits and prospects/perspectives of research
 - 6.2.1. Research limitations
 - 6.2.2. Research perspectives

SELECTED REFERENCES

ANNEXES

3. INTRODUCTION

In the observation field of accounting, in addition to financial accounting, managerial accounting, public accounting, etc., *national accounting* represent *a broad knowledge of accounting*, specialized in integrated quantitative study of economic relations. Whatever the manner in which expert studies addressing to this area (critical or doctrinal), the need for extensive study of this scientific discipline in recent years has become more acute, the creation of an internationally compatible accounting framework, allowing the description complete for a full/overall economy and its components has become a necessity. Therefore, achieving of an scientific approach, fixed on the study of national accounting, *on highlighting of the fulfil role of national accounts in the macroeconomic system*, without leaving aside the subjects with which it is working, it is a necessary to develop and grow.

We all aspire to a perfect world, in which economic phenomena and processes are controlled, the malfunctions of macroeconomic system (crisis, recession, economic depression, etc.) not happen again. Viewed from this perspective (the macroeconomic system functionality), national accounting cannot be limited only to reflect beyond of this. It/She expresses the fact extension of the accounting cognition from the micro level to macro level, during it being mandatory the rigor and objectivity in covering socio-economic phenomena. Researching national accounts is an important problem, which consists of a double necessity, which is to observe, record and measure in figures the economic activity of a nation, in order to substantiate macroeconomic decisions, prevent and eliminate malfunctions of the macroeconomic system, followed by permanent adaptation to current needs of alignment to the European system of Accounts (E.S.A.) in accordance with the rules of the national accounts worldwide (N.A.S.). In this context, in the area of scientific research have been brought into debate the conceptual framework, institutional framework, operations reflected through the national accounts, methods of presenting flows and stocks in the national accounting, national accounts system inspired by the French model, the harmonization of the national accounting systems, together with the utility of information presented in national and regional accounts. I have attached to our area of cognition, the theories launched by various researchers relating to the Status of national accounting in achieving the true and fair view in the presentation of information from national accounts. The research seemed to become more complex as the opinions released by specialists came to challenge the nature/character of science awarded to national accounting. Even more so, they cast doubt upon the achievement of the true and fair view concerning the information

provided by the national accounts. Without being limited to it, the emitted theme presents a particular interest in international research. Current circumstances imposed by the increasing demand increasing of macro accounting information at national, communautaire and regional, have contributed to the shift from version SEC 1995 to the version SEC 2010 until 2020 by member states of the European Union. Therefore, the integration of the main features of the European System of Accounts ESA 2010 and the accentuation of the differences between the two versions SEC 1995 and SEC in 2010 was a topic of discussion attached our area of interest. The practical study, included in the performed research, focused on issues related to: preparing the complete economic circuit of national economy, the economic Image of the Simplified ensemble, achievement of a balance between resources and uses, preparing of the institutional sector and regional accounts, of the calculation and analysis of specific indicators for national and regional of accounts, as well as the achievement of a mathematical model for estimating regional GDP to highlight differences between regions and to estimate the GDP forecasted.

4. REASONS FOR CHOOSING THE RESEARCH TOPICS

The origin of any scientific endeavour is the researcher's curiosity, in its skills to observe and to express ideas. In this sense, one of the motivation elements in choosing the research topic for achieving the thesis "National accounts in informational macroeconomic system" is the desire of extending the horizon of knowledge related to the manner of using the information from economic entities at the national level, and how it is evaluated the economic level of a country or region. Another argument justifying the need for the scientific research is the fact that is given less importance to the national accounting by a quite significant number of academics. Even if economists' practitioners from governments, business world and international bodies used extensively the information presented in the national accounts, there is little theoretical and practical concerns that are directly recognized national accounting issues. The literature presents different views of scientists related to the place it occupies in the overall national accounting knowledge, raising the interest in research on identifying leading status in the overall national accounting knowledge. One of the concerns that we had to achieve our research has been directed towards the evolution in time of national accounts and its harmonization with the European System of (National) Accounts versions SEC, aligned with the US national accounts. In this

research project we will mainly discuss the national accounts as part of macro-economic information system, because through it we wanted to highlight:

- The importance and usefulness of the information provided by the national accounts for the macroeconomic system;
- Sizing of existing research in the areas of research;
- Identifying and exposing the position of the national accounting;
- Identifying marks, contributions and qualitative factors in the evolution of national accounting;
- Examination and presentation the relationship on which national accounts system develops with the macro and micro economic informational system;
- The development and deepening of doctrinal and practical aspects of information content, reflected through national accounts;
- Expanding horizon of knowledge regarding the preparation of national and regional accounts on the one hand and the determination of indicators reflected through them on the other side;
- Preparation and presentation of a model for estimating the evolution of regional GDP by using the method of least squares;
- The importance given to national accounting by the experts from the field.

5. THE CURRENT STAGE OF KNOWLEDGE, NATIONAL AND INTERNATIONAL FIELD OF RESEARCH

The realised scientific construction was based on reference papers of the domain, which appeared during the study at the international level, especially in French literature which focuses directly on national accounting topics without leaving one hand, the Romanian one. In order to formulate our opinion regarding on the status of national accounting in the knowledge process, we analysed the objective as far as possible is in interpretation of the works and opinions of many researchers of the field. Therefore, we have formed our own opinions about the national accounting, which we consider to be a distinct field of knowledge, a discipline of economic sciences, with *a clear interdisciplinary character*, able to provide a system of relevant and verifiable information on the economic activity of a country or region. Starting from the fact that national accountings always make a big contribution to the macroeconomic system, as part of it, we focused on macro-accounting

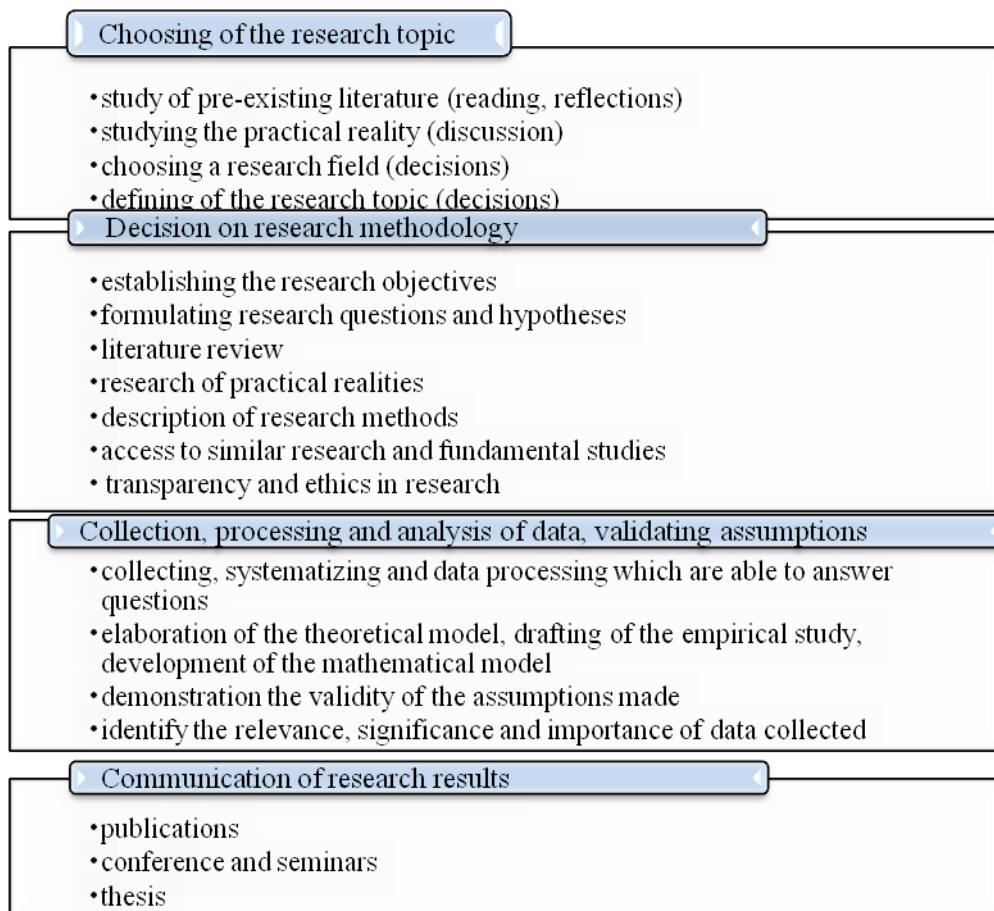
information, present in the accounts made on economic issues, institutional sectors, macroeconomic accounts and regional accounts. Therefore, I structured and scientifically interpreted these topics through theoretical and practical approaches of the main indicators of N.A.S. We managed to give so, a form of our convictions formulated during the study, on the fact that we can not consider the national accounts just a technique, restricted only to provide research and observation tools for economic sciences, since even act itself in such research. National accountings describe the entire national economy in a rigorous accounting framework and measure quantitative phenomena related to production, storage, distribution, allocation. Information presented in the national accounts reflects past activity, being particularly important in developing forecasts and macroeconomic policies. National accounting shows economic reality as the economic circuit, which reflects a complex interaction between all the elements of economic life. In this sense, the approach of our research was aimed at identifying the three types of operations which represents the activity of a national economy, and showing the form in which can be presented to the complete elaborated/developed circuit. As its alternative representation, we identified that the economic picture of the assembly, upon which we have insisted, is illustrated by a numerical example, based on economic assumptions adopted in the circuit completely, the columns are represented sector accounts and on line transactions. Bringing together the operations presented in the economic picture of assembly, we took into consideration that the balancing of the accounts is made through inserting the capacity or the need for funding within the sector account in order to underscore the balance between uses and resources (equality particularly important to keep the economy). Currently, the steps taken by Romanian economists, in particular those from the NIS, the body tasked with developing national accounts, including those of heritage, are oriented vigorously to a most accurate alignment with European standards regulated in this area ESA 2010. In terms of science, we can say that Romania has a small community of researchers in the field of national accounting in relation to other countries, but the research in this field is carried out by a small number of specialists from universities, the National Institute of Statistics and National Bank of Romania.

6. SCIENTIFIC RESEARCH METHODOLOGY

The elaboration of a scientific paper requires from the researcher, involvement in scientific research to identify methods that best suit the purpose. Research method, in

the opinion of Radulescu (2011: 34) "is the way forward to carry out an investigation and research methodology is an integrated system of methods, which represent all the approaches conducted by thinking to discover and to prove a scientific idea, ie to produce scientific knowledge and enhance the science." In order to achieve the stated purpose, it was necessary that the research methodology to be addressed with rigour, scientific approach running sequentially the proceeding through several stages:

Figure 1 The main steps of the scientific research



(Source: the projection made by the author)

Choosing of the research topic as the first stage was based on personal preferences and interests, and include road covered from the general domain of knowledge (accounting) at the specific one, ie "National accounts in informational macroeconomic system". The second step is to determine which research methods will be used to collect data, being a guide to research approach, which establish the next stages of processing and data analysis (McQueen & Knussen, 2006: 33). Collection, processing, analysis and validation of hypotheses is the most complex

phase of scientific research, because here collected data are organized and systematized, here the most appropriate method of calculation and analysis is chosen, here the hypotheses and theoretical models are developed. This step gives purposeful efforts in conducting scientific approach, presenting findings, validating or invalidating the results of research. To reflect causal relationships between data which refer to developments in economic phenomena and processes, mathematical calculations have been performed, with the formulas for determining of some indicators or indices. The last step is the communication of research results (dissemination), and lessons/conclusions learned.

In the whole paper can be observed many elements of research: documentary analysis, method comparative, typological method, external observation (non-participating), participative observation, induction, deduction. To distinguish and determine the qualitative properties of the phenomena studied, and connections between these, using methods that allow the registration, classification and quantification of quantitative characteristics, in the study are combined a number of general methodological elements, such as the types of research, research methods, time horizon, the current research and data sources. The study undertaken is focused on *a type of documentary research, applied in accounting*, and combines analysis with synthesis, logical research with historical one, qualitative research with quantitative one, and theoretical perspective (descriptive) with practical one (application). *Qualitative research* carried out, largely, was based on interpretative methods for understanding the effects of the national accounts system exerts on macroeconomic information. *Quantitative research* is rational and uses the measurement, quantifying and expressing figures. *The measurement or scientific quantifying* translates on qualitative or quantitative expressions, symbolic or figures, economic phenomena and processes. This is accomplished through indicators, indices, equations, relationships necessary to carry out economic analysis. In this paper, this approach is found mainly in Chapters 4 and 5, in which we determined, controlled and analyzed absolute indicators (increase or decrease absolute) and relative indicators (dynamic indices with fixed base and base chain indicators) and average indicators (average growth rates) characterizing multiple quantitative relations. *Typological method* was commonly used for making different classifications on the theories of national accounts, the institutional framework, the conceptual framework, macroeconomic indicators and the regional.

Non-participating observation is due to the nature of the research and the current stage of knowledge in the field of interest, being observed mainly in terminology and approach rules on N.A.S. *The analyses performed, comparisons made, creation a mathematical model to estimate the regional GDP, own opinions and conclusions reveals*, however, aspects of *participant observation* used in research. *Demonstrative examination* is a method through which it seeks arguments in order to confirm or refute assumptions, for demonstration of laws, principles, or algorithms.

For data analysis is mostly used the *comparative research method with longitudinal nature* (the evolution of national accounting, the presentation of versions for National Accounts System) and *comparative method with cross-cutting character* (comparative presentation of various theories and opinions on the status of national accounts).

During this research, elements of *current research* with different aspects (*positive, constructive and interpretative*) are meeting, which seeking to explain and interpret the details in a logical, concise, clear and unbiased form, theoretical and practical situations related to national accounts, their usefulness in tracing the causes of certain economic phenomena. In order to present our views to clarify certain aspects of the status of national accounting, regulations and practices in the field, *critical current* is always present in the research. As a whole, this scientific approach is focused on three main areas of research: *normative research* (regulations at national, EU and international level) *doctrinal research* (literature, specialist training), *practical research* (publications of NIES). On this line, the information sources underlying the research are the specialty books of Romanian and foreign authors, articles published in national or international journals, regulations and legislation published by NIS, the Ministry of Finance, documents issued from different national and international organizations working in the field of national accounting: UNO, EU, OECD, IMF, National Bank, the National Institutes of Statistics from different countries.

7. BRIEF OVERVIEW OF THESIS CHAPTERS

To achieve the purpose, the thesis entitled "*National accounts in informational macroeconomic system*" is conducted across five chapters, introduction, conclusions, perspectives and limits of research, selective references, which were divided in several chapters, according to the needs and content. The first three chapters in particular are mainly theoretical, but fourth and fifth chapter have practical studies, applied to developing the accounts for institutional and regional sectors, to determine, analyze their specific indicators, to calculation and analysis of synthetic indicators for results, to estimate GDP by the method of least squares.

The first chapter entitled "**National accounts - location in the current state of knowledge**" begins with a discussion on the state of scientific knowledge in national accounting, in order to identify the position of national accounts in the field of scientific knowledge. Over time, there has been and continues today to be many controversies and dilemmas related to national accounting recognition as a research field of accounting, and that why I considered necessary to clarify this issue, using more doctrinal approach. Throughout this part, we sought to identify, interpret and explain through debate (interpretive type), in our view regarding the status of national accounting in the general field of scientific knowledge.

Following theses and antitheses advanced by various researchers, through qualitative approaches, we reviewed the literature dedicated to the area of knowledge of national accounting, and we analyzed by an unbiased assessment, the views of the authors of each work to include or not national accounting in the sphere of economic acquaintances. The complexity of the research area occurs as a result of interdisciplinary character, especially due to implications in active economic life. The main existing theories on the status of national accounting guidelines reveals that the researchers guidelines have been directed towards finding a descriptive model that allows the grouping and systematization of some very complex data, with links between them, which expressing the fundamental equilibrium of an economy, which reflect better past activity, which anticipate economic future. Therefore, we considered it is important to emphasize the interdisciplinary nature of research by examining the relationship which is develops between N.A.S. with informational macroeconomic system and to study the relationship between national accounts and micro accounts.

Chapter 2 entitled "**From appearance at contemporary approaches on national accounting**" is dedicated to the analysis of the historical evolution of national accounting. Through quantitative and qualitative approaches, combining the logical research with historical one, we exploited classical and neoclassical theories in order to identify the most important historical landmarks in the development of national accounting, analyzing in each defined period, the most significant contributions of various researchers from different countries through a constructive debate. Also, we identified factors and causes that influenced the emergence and the development of national accounting, in comparison with European and international standards. The analysis and synthesis, regarding determination of historical national accounting, followed by a series of launched debates, trying to bring to the fore an international approach, intended to reveal the connection between practices and accounting consequences on one hand, and macroeconomic policies on the other. In order to identify the main moments of international harmonization and future trends that will mark the evolution of national accounting, we presented the main regulations and versions of the S.N.A., at international, European and national levels, and we analyzed their evolution in time. At the international regulation level we focused, of course, on identifying and presenting the differences between the 2008 N.A.S.U.S. (National Accounts System from US) and ESA 2010 (European Systemic National Accounts) whose implementation will take place from September 2014 to 2020 when all member states will adopt this system. At the European regulations level we take into consideration the presentation of the differences between version applicable SEC 95 for European System of Accounts and ESA 2010, version that will gradually replace the old one. Since harmonization of National Accounts System in Romania was done after French model, in the normalized system ESA 1995, the presentation of structure and content of the national accounts has been made after the French model of normalized system, as it is reflected in the literature of France, by the various specialists, such as Jean-Paul Piriou (2006), Daniel Labaronne (2001), Frédéric Teulon (2009). All this, presents for France the same group of National Accounts (comply with ESA 95), but also with the national accounts system adopted by Romania.

Chapter 3 entitled "**General framework of the national accounts**" is focused on creating an overall picture of what the national accounts represent inside of the informational macroeconomic system. During this part we outlined through the analyzed studies the conceptual framework, institutional framework and related operations for established research area.

We focused attention on some key issues, such as the usefulness of information provided by the national accounts (NAS is data system integrated and coherent? SEC is compatible accounting framework at international level? NAS is used in the analysis, calculation and macroeconomic outcomes?), the concept, the typology, the users, the research object and method, the principles, the registration rules, economic circuit and operations reflected in the national accounts. We decided that the whole research approach based mainly on documentation, it exceed beyond to custom opinions, assumptions, or macro-accounting models for registration, and it checked the coverage of concepts at the theoretical level on the structure and presentation of flows and circuits from a national economy. We followed and succeed to present the elements that underlying the system of national accounts: cash, stocks, economic circuit, principles, procedures, operations with goods and services, financial operations, distribution operations. By examining these elements, we wanted to emphasize the idea expressed in the first chapter of the thesis, according to which, national accounting is an economic discipline that belongs to accounting domain Also, I gradually reconstructed the circuit in goods and services in the economy, the distribution operations, the financial operations, then a the complete developed circuit of a national economy, and finally on the one of the Economic Panel Assembly, as an alternative representation of the fully elaborated circuit of national economy. As applied part of the thesis, I prepared as numerical example, the Economic Panel for Simplified Assembly (EPSA), which is based on assumptions adopted in the full developed circuit of national economy, with double entry, on the columns are represented the sector accounts, and on lines are the transactions. The data contained in this panel we used them to illustrate numerical the way of balancing for institutional sector accounts.

Chapter 4 deals with "**Content, calculation method and analysis of the indicators determined based on information provided by national accounts**", and covers the following: definition of the content of economic categories expressed by the indicators of national accounting, analyzing their structure, examining the use of Material Production System and National Accounts System, presentation and analysis of the accounts, calculation method, structure and evolution of the main macroeconomic indicators, determined on the basis of the accounts of economic issues, institutional sectors and macroeconomic accounts, over a timeframe, in order to identify the economic status of Romania. Making practical part (applied) is subordinated to the main stated purpose of the thesis, being oriented to description, formulation and explanation the way in which the

information from the national accounts can reproduce all economic operations performed within an economy. We intend to demonstrate, in practical terms, that always, national accounting brings a great contribution to macroeconomic system (as part of it). For this, through qualitative and quantitative approaches, based on induction and deduction, on formulas and mathematical calculations, we determined indicators, having our focus on macro-accounting information, existing in the accounts made on economic issues, institutional sectors and in macroeconomic accounts. To analyze the evolution of economic phenomena and processes, we used the comparative method, based on static or dynamic research, to track the deviations of absolute indicators over time, determined through difference, or relative deviations determined by indices. Since documentation for the applied part was done by using multiple sources of data, it was necessary to use the comparative method to confront them and to determine their adequacy or inadequacy. For organizing and systematizing information from documenting this part of the paper, we have prepared statistical tables and graphs, upon which, using induction, we draw general conclusions, or using deduction we explain resulting phenomenon. Internationally, there are two systems used to calculate and measure the macroeconomic results and therefore, using comparison we tried to point out the substantive differences between aggregates determined in the Material Production System (MPS) and determined in the National Accounts System (NAS). In the analysis, we tried to take a categorical position on the application of one or other of the two systems in practice. Analysis of macroeconomic indicators highlighted the importance of the need and usefulness of the composition of national accounts, the importance of determining indicators, and especially GDP, the most representative macroeconomic indicator used both to characterize the national economic condition of a nation and internationally to make comparisons between countries. The importance of the way in which the national accounts are estimated exceeds national borders. Romania, as a member state of the European Union, must report after an established schedule, information from national accounts, the quality of the information submitted is reviewed constantly by Eurostat.

In Chapter 5, "Regional National Accounts (RNA) and regional indicators - doctrinal and practical approach", the research work has been oriented, beyond the theoretical documentation and practical approach regarding the methodology of compiling regional accounts and regional aggregate estimates, for presentation and implementation an mathematical model to estimate regional indicators, to identify gaps between regions, in

order to demonstrate, based on the calculations and obtained results, that estimates based solely on mathematical methods without taking into account other factors, may prevent the negative effects of the economy such as, for example, the economic crisis. In the first part of this chapter, through qualitative approaches, we sought to clarify aspects of theoretical benchmarks aimed at regionalization, regionalization methods, for the content and methodology of developing regional accounts and regional aggregates, with the aim of highlighting the role on which regional accounts represent in the implementation and evaluation of disparities and eligibility for regions, in the setting process of European cohesion policies. In this discussion, we identified using documentary analysis and participant observation that, the descending regionalization method applied in elaboration of regional accounts in our country is difficult, requires estimates which did not start from direct data, questioning the relevance of the data. Next, our efforts were directed towards developing a practical study, allowing deeper knowledge of economic categories expressed by regional accounting indicators, of performing analysis of the structure and evolution of regional indicators, of estimating the regional GDP in Romania, of the calculation for disparity index to refer gaps between regions. In order to identify the economic situation of Romania's regions, analyzing regional GDP (RGDP), regional GVA (RGVA), net primary income and net disposable income were based on quantitative research. To complete the contents of each chapter, as well as the thesis (as a whole), in the final part of each chapter have been placed preliminary results and conclusions. At the end of the thesis, we have research perspectives and limitations.

Each of these include conclusions presented, our views and our considerations, motivated both theoretical and practical, in terms of statistical analysis, based on multiple information, relevant and updated.

8. GENERAL CONCLUSIONS, PERSPECTIVES AND LIMITS OF THE RESEARCH

The general conclusions extracted from the research

From the first part (**Chapter 1**) of the thesis we aimed to clarify the status of national accounting in the general field of knowledge. The debates launched and presented in this first section, highlights the fact that, currently, researchers have different approaches regarding national accounting, in terms of its scope of knowledge. The literature studies

reveal the existence of two current views of researchers, for and against for confer the status of science for national accounting. Following the analysis of these debates, in formulating our point of view we have located for the current positivist, and we considered *the national accounting as a distinct field of knowledge, a scientific discipline that expresses extension of accounting knowledge from micro level to macro level, having a strong interdisciplinary character*. To justify accepting of national accounting as a scientific discipline in the field of economics, accounting domain, I made the same arguments that show that this is an *established economic science*, which is based on the same set of specific concepts and tools for operation, like economy. The status of *science in accounting domain*, granted to national accounting, is justified by the fact that *it has its own research object and own method of obtain it*. To achieve its object, national accounting method uses a series of special procedures (*account and balance sheet*), and other common economic disciplines (*documentation, evaluation, inventory, aggregation, consolidation*), or common to all sciences (*observation, reasoning, comparison, grouping, analysis and synthesis*). *National accounting is based on the principle of double entry accounting*, as own method. Most of the *information* on flows and stocks are *liable to accounting*, come from accounting of entities, which prepare financial statements and reports that are input support for national accounting. There are a number of *common features of national and micro accounting*, such as recording transactions in the accounts T-shaped (tables with two columns), monetary valuation, using accounting balances, recording transactions when they occur, and internal consistency of accounts system. During the transition from firms accounting to national accounting, I have noted that direct relationship are the following: production accounts and income accounts from the national accounting, identified with profit and loss account from entities accounting, and financial account from the national accounting, identified with changes in financial position and cash flows, from micro- accounting.

These relationships can be very difficult to use in elaboration of national accounts, only by simply aggregating, because valuation methods and accounting conventions used at the micro level must be similar to those offered at the macroeconomic level. Therefore, at international level, the process of normalization is trying to adapt the microeconomic accounting systems to the needs of the national accounting system.

National accounting is a *social and applied science*, is considered to be a creation of man, reflecting the activities, events and social facts, and provide information to all users, participants in economic life.

In our approach, we have not ignored the theses according to which, national accounting is considered to be a *technique of macroeconomic management, which belongs to statistics*. Indeed, national accounting involves the processing of large volumes of data, sometimes even statistical nature, but *uses a conceptual and methodological framework as accounting type*. Have been reported some *limitations* regarding the *quality of database of the national accounting*. National accounting can not measure the effect of using price subsidies against to inflation expectations or to the population income, or may not suggest which are the most appropriate funding mechanisms and their effects at macroeconomic level. Therefore, national accounting should work with other scientific disciplines, such as statistics and macroeconomic analysis.

National accounting shows post facto informations regarding the national economy, and sometimes with a significant delay, which calls into question the achievement of an accurate image, according to which accounting data should be recorded in the accounts in time, to be processed and used. However, It should be recognized that, the crucial role of national accounting is to reflect past activity in order to better knowledge of economic phenomena, in order to expansion into the future, through macroeconomic forecasts, political and economic planning. Data on households, obtained based on statistical techniques, may be also questioned the achievement of the true view by national accounting, because the accounting informations should provide users an adequate description, should be accurate and complete. Nevertheless, we appreciate, that estimations for the institutional sector "Households" can not influence in a very large extent the results of data processing, taking into account their size.

Continuing with the literature review (**Chapter 2**), we emphasized the most important contributions of scientists to the emergence and development of national accounting. We believe that, this *appeared as a system for recording and analyzing the entire economy, following an evolutionary process* mainly determined by the nature of prevalent political, which involving state intervention in the economy, and today is *an irreplaceable tool in the implementation of macroeconomic policies*. The progress of national accounting research in the first decades of the XXI century, depend on a good combination of the main features, which tends to become European School on the one hand and American School, on the other hand. Economic transformations have accumulated to a limit that may indicate the existence of a new qualitative leap of National Accounts research (transition to the SEC 2010 compatible with 2008 SNA). In Romania, the harmonization of national accounts has

been made after normalized French model, which includes *current accounts* (production account, income account, the allocation of primary income account, the secondary distribution of income account, the use of income account), *accumulation accounts* (capital account and the financial account) and *heritage accounts*.

Debates on the usefulness of national accounting presentation (launched in **Chapter 3**), lead us to formulate a personal opinion, that the information resulting from the preparation of national accounts, aims to achieve two major objectives, namely *to inform and shape the economic activity of a countries over time*, also *to provide the evolution of economic processes and phenomena that could affect the equilibrium of macroeconomic system*.

National accounting allows comparisons in the horizon, ie international comparisons. Through NAS are appreciated the performances of various economies, comparing the level and rhythm of development of the various aggregates of the country. This comparison requires the aggregate normalized, ie all measures calculated for all countries using an identical method and sent to the international organizations (UN, IMF, World Bank) with the purpose of making international comparisons. Economic realities reflected through the National Accounting System, groups together the accounts after space characteristics at national, multi-country and regional level, and after time characteristics, are being built quarterly accounts, annual accounts, accounts over several years at some time accounts. The concepts and the elements on which the national accounts system is based, are found in the form of flows, stocks, institutional units, institutional sectors, branches of economy, economic circuit, principles, processes, users, operations with goods and services, financial operations, distribution operations, panels. In the SEC are used two units and two related ways of subdividing the economy, which are quite different and serve specific analytical purposes, the first describes the flow of income and expenses, cash flows and heritage accounts, through regrouping institutional units *by sector* and the second takes into account the representation of processes of production, and input-output analysis by regrouping local units with economic activity *on branches of activity*. In connection with the first group, the new version of National Accounts ESA 2010, as against ESA 1995, present the "Financial Corporations" sector a split in more comprehensive sub-divisions, being introduced new sub-sectors, which pooled together the captive financial institutions and other lending entities, insurance companies, pension funds. Also, except for the Central Bank, each sub-sector is divided into public financial corporations, private financial corporations, financial firms under foreign control. This division gives the possibility of more comprehensive

information to carry out financial analysis and financial risk prevention. Inside of NAS, economic operations are considered economic flows, and are grouped according to institutional sectors and classified according to the nature of economic activity in three categories: *operations on goods and services*, *distribution operations*, *financial operations*. SEC 2010 include a fourth group: operations not included in the three groups mentioned above, acquisitions less disposals of non-produced non-financial assets.

In economic practice, National Accounts System, always bring a great contribution to the informational macroeconomic system. In order to analyze and describe the economic activity of a country, in a certain period of time, it is necessary that at the level of economic subjects, economic sectors and the national economy, the structure, size and dynamics of material goods and services produced are measured (**Chapter 4**). This leads to the need to obtain indicators to express in monetary units, the production value, gross added value, gross disposable income, gross economy, capacity or need to be financed. As a result of multiple aggregation and integration of information included in the accounts made up on economic issues, sectors and branches of activity, the national accounts present these indicators in the form of balance, based on which, we can calculate and compare the most important indicators used in the calculations and economic analysis conducted by international bodies: GDP, NDP, GNP, NNP, NI, DI. In order to characterize the economic structure of a country, the most representative indicator is GDP. By analyzing the evolution of GDP can obtain information that indicates the economic status of a country, represented either growth or an economic downturn. From the analysis of the contribution of economic sectors to GDP formation, information can be obtained, based on which we can estimate the level of development of a country relative to other countries. The macroeconomic indicators of results, determined based on the information provided by the national accounts, are debates themes among researchers, public and private companies. The economic crisis, the government, companies, banks, stock market institutions, trade unions, population, presents a broad interest in the negative developments in the economy and requires information provided by the national accounts, which reflects the results achieved at national or regional level. Internationally, there are two systems used to calculate and measure the macroeconomic results. In response to the differences between this two systems, it can be seen that the national income is determined in accordance with the conception of MPS is lower than the indicator determined in NAS with the value added related to intangible services considered by MPS as unproductive. In the MPS, due to the delimitation of

production, is seen the non-existence of institutional sectors, as defined by NAS, due to the fact that the state and households are considered to be non-creators of value. Also, in MPS, in productive consumption of material sphere, does not include expenses related to non-material services. Significant differences is distinguished in depreciation process of tangible assets used productiv, which are embedded in intermediate consumption, state consumption is not highlighted in the final use, being included in the collective consumption. Reported differences lead, finally, to inconsistencies between the aggregates determined in MPS and those determined in the NAS, and therefore, on the extent of their transfer to a market economy, *it is necessary to replace the MPS with the national accounts system. National Accounts System is a system of observation and measurement*, this being justified by the indicators determined and analyzed in time horizon 2007-2011. Due to the economic crisis, the evolution of indicators is a fluctuating one. So, the period 2007-2008 marks a positive evolution of the Romanian economy, is evidenced through the summary information in the institutional sector accounts, relevanted by trend growth (in nominal terms) of the main indicators of sectors. Crisis triggered at the end of 2008, has made that 2009 mark *a decline in value added in the sector "Non-financial corporations"* due to lower production of goods and services and increase intermediate consumption. On amid of economic crisis, 2010 maintain this indicator on a decreasing trend. The year 2011, under the effect of involving the production of goods and services (industry showed a consistent performance) it sets the tone for recovery from recession. Under these conditions, the value added recorded a bonus absolute in increasing with 60.520,5 million lei compared to 2007, with 9.460,1 million lei from 2009, with 11.340,5 million lei from 2010. Gross economy of sector in 2008 was 96,054.8 million lei, with 22.49% higher than in 2007, representing 71.61% of the gross operating surplus. *The requirement funded* decreased in 2008 by 2.77% compared to 2007, due to capital transfers and modification change in stocks. In period 2009-2011, been recorded register positive values of indicator, which indicates financing capacity, due to lower investment during the financial crisis, and monetary policy measures taken to avoid crisis. Gross operating surplus recorded, except in 2010, an upward trend. In year 2010 is recorded a decrease of this indicator, due to increased taxes on production and imports, and reduction of subsidies on production. Evolution of Romanian economy during 2007-2008 had a positive impact on the sector *"Financial Corporations"*, thus, in 2008, *the gross value added* was 44.4% higher in nominal terms than that recorded in 2007, and the one of production was increased with 41.21%. Crisis moment 2008-2009 has led to a temporary decrease of production and value added of the sector. Gross economy was 9703.1 million

lei in 2009, with 6.732,5 milioane lei higher than that recorded in 2008, due to the decrease of remunerations of employees with 382.2 million lei and of other taxes on production with 470.30 million lei. In 2010, this structure has changed, thereby that, taking the base year 2009, there was a decrease with 94.88% of taxes on production, and an increase with 6.72% of the salaries of employees. These changes took effect on gross exploitation surplus, which increased with 11.66%. *Financing capacity* is recorded growths year after year, only except for the year 2008, when the indicator decreases with USD 1.191,7 million as compared to 2007. These changes occurred as a result of fluctuation of the difference between interests received and paid. Institutional sector "Financial firms" is recording financing capacity based on strong growth of interest received, which contributes to the financing of other institutional sectors of the economy. From the data presented, is observing an increasing trend of production "*Public administration*" in the period 2008-2009. Nevertheless, in the years 2010 and 2011 follows an increasing trend, in year 2011 the production recorded by public administrations is with 1.57% lower than in 2010 and with 10.12% compared to 2009. In year 2011, *gross operating surplus* was negatively influenced by the decline in gross value added (resource), but this influence was balanced somewhat by lower salaries and social contributions (uses) due to layoffs from this sector. *Gross economy and requirement of financing* records negative values in 2009, due to reduction of gross national income and gross disposable income, which in 2009 registered a value of 76,042.8 million lei compared to 2008, when its value was 95993.1 million lei. *We believe that against the gross national income, closure or insolvency firms have contributed to its reduction.* As evidenced by the "Allocation of primary income" for the period 2008-2009, due to alleged events, taxes on production and value added tax as resources of the account, decreased in 2009 compared to 2008 (taxes with 6013.9 million lei, and VAT with 7333.6 million lei). Capital transfers receivable - which in 2009 were in amount to 1535.0 million lei, in 2008 were 3989.6 million lei - adjusting income and increasing of expenditure for final consumption has contributed to increasing the requirements for funding in 2009. The overcoming the level of revenue for public administrations by the expenses incurred on this sector, in 2011, led to the formation of a necessary funding of 30,901.2 million lei, lower in absolute value with 4650.5 million lei than the one recorded in 2010. We believe that the influences which have helped to reduce the requirement of financing for the sector "Public administration" in 2011 compared to 2010, are primarily those of a fiscal nature, that led to revenue growth with 8.23% compared to that of the expenditure which have been recorded a growth rate of 4.62%. Income level is marked by the change in 2010 for VAT rate from

19% to 24%, and the positive evolution of the exchange rate with implications of increased excise taxes. The reduction of wages and actual social contributions with 11.530,6 million lei, in absolute value, in 2011 compared to 2010, was due to introducing the Pillar 2 of pensions and maintaining a moderate trend in the evolution of the average gross wage income. There is a positive trend of all indicators of "Households" for the periods 2007-2008 and 2010-2011. Final consumption, as using income, has been recorded an increase with 11.58% in 2011 compared to 2009, but only with 5.15% compared to 2010, *which is sounding the alarm on the living standards of the population in 2011, or change behavior in relation to the structure of the products purchased. Gross economy highlights the orientation of population toward the expenditure of final consumption.* There is an increasing trend of this indicator especially in year 2011 in comparison to year 2010. *The trend towards private households' consumption has been encouraged by the conditions in which the loans were offered on the banking market. It is worth noting that the real estate boom spurred a growth in final consumption and gross capital formation in the sector "Households", but emphasized the tendency to call on loans. Increasing private sector debt is in fact one of the most relevant alarm systems that can predict the effects of a possible crisis.* The stronger trend of declining savings rate during 2007 and 2011, shows that while household income have increased due to decrease confidence in the banking system, in monetary policy, the saving for money resources has diminished. We believe that the trend towards consumption of "Non-profit institutions serving households" has influenced the evolution of gross economy and emphasized the increasing of financing needs in 2009-2010. As a result of the persistent negative gap between imports and exports of goods and services, trade balance recorded a deficit in 2011 in value of 29,628.8 million lei. *The synthetic indicators of presented macroeconomic results has serve to highlight and analyze for some key aspects of economic activity, being evaluated at market prices (the buyers prices) or factor prices (the producer prices).* The macroeconomic indicators for results can be expressed in current prices (prices of each year) as *nominal indicators* or in constants comparable prices (the prices for a period considered as basic) as *real indicators*. In practice, in order to quantify the changes occurred over a period of longer time, the size of these indicators must be expressed in comparable prices or constant. In order to obtain the real indicators is necessary that, from the size of the resulting values expressed in current prices, must be deleted the influence of price modification, thus achieving the deflating of nominal indicators. From the data analysis set out as a result of determining the indicators of results is observed structural fluctuations and their evolution in time

horizon from 2007 to 2011. *It is noted that the increasing of activity from the private sector had a influence over the positive evolution of the GDP in 2007-2008, as a result of the privatization process.* Thus, in 2008, a significant share in total (about 48,6%), is occupied by services, followed by industry with 23% and construction with 10,9%. In 2009, the value of gross domestic product decreased by 13.560,6 million lei compared to 2008, being influenced by a slight decrease in the share of agriculture in GDP (from 6.6% in 2008 to 6,5% in 2009) and by the reduction with 3.321,20 million lei of construction volume. In 2010-2011 is observed the maintenance of a high share of services and industry, decline in the share of constructions and increasing the share of agriculture in total gross domestic product. The period 2007-2008 recorded in absolute values an upward trend in all indicators presented, but some indicators recorded decreases, as shares in GDP. Thus, the actual final consumption in 2008 represents 81,8% of GDP, with 1.1% less than in 2007 when it registered 82,9% share of GDP. For the same period, the final collective consumption for public administrations, the formation of gross fixed capital, the export and the import, is recording growths, as shares of GDP. In analyzed period, the exports are lower than the imports (the gap from import - export being in value of 156.629,3 million lei). In 2011, actual final consumption was 437.355,3 million lei, representing 78,5% of GDP, with 1,7% lower than 2010. The gross formation of fixed capital (GFFC) equaled to the value of 145.139,4 million lei and has owned 26,1% of GDP in 2011, compared to 2010, when it recorded a slight increase of 1,4%. Total exports of goods and services were in value of 222.944,9 million lei, representing 40% of GDP, recording an increase with 4.6% over 2010. Total import of goods and services was in value of 252.573,7 million lei and had a share of 45, 3% from GDP, increasing by 4.1% compared with 2010. The analyze of macroeconomic indicators emphasized the importance of the need and usefulness of the national accounts composition, the importance of determining indicators, especially that of Gross Domestic Product, the most representative macroeconomic indicator used both on national level to characterize the economic condition of the nation and on internationally level, to make comparisons between countries. GDP is a benchmark in the formulation of national and EU policies.

The regional problems (**Chapter 5**), through their nature and content, varies greatly from one country to another, them being the result of specific conditions and factors that characterize each state. Their resolution has some features both in terms of regionalization of the territory, as well as accomplishment of regional policy. Diminishing the economic

gaps is one of the most complex and difficult issues of regional policy. At Community level, the policy of regional development seeks harmonious development of the European Union, by reducing economic and social disparities between the various regions of the member states, in this respect being established the economic and social cohesion funds. The territorial division involves regional dimension of economic and social phenomenon and represent an important requirement in the implementation of regional policy, which should be made based to scientific and well-defined criteria. *We believe that for Romania, the relocation of the administrative-territorial units from the level of the NUTS 3 (county) at NUTS 2 level (region) would be a substantial reduction in government spending.* The establishment of regional accounts is quite difficult compared to the preparation of national accounts, because it raises the following issues related to the fact that: the access to the necessary data is more difficult, the standardization by sets of accounts for the various regions in different time periods is difficult to achieve, interregional trade and capital flows are not usually recorded in the statistics, regional borders being opened, the scope of the income is not the same as the gross regional product, some revenues do not have clear regional location (such as: undistributed profits firms, some expenditure of central government). At the regional level are elaborated only two accounts, one for the allocation of primary income of households and the other one for the secondary distribution of income of households. Regional accounts are actually the analogue of national accounts at regional level. The method used in elaboration process of regional accounts is the one descending, which makes that their preparation is quite difficult in relation to the accounts established in the national accounts. Disadvantages of this method consist of difficult access on the dates required, in challenging elaboration by sets of accounts for different regions, in different time periods. This method involves providing estimates, which are not calculated from the direct data, but through a key distribution. That is why it has the disadvantage of providing estimates which are not calculated from the direct data, questioning the relevance of the data. However the method has the advantage of numerical consistency between national accounts and regional accounts. We believe that, using the ascending method in developing regional accounts would be more appropriate, as it appeals directly to relevant data sources at the regional level by collecting information from resident units. By applying this method, could be established at the regional level, the full set of accounts prepared at the national level, by creating a database, whose updates must be made directly by resident units, by using IT. Otherwise, the strategic guidelines of the European Statistical System, as presented by some authors (Voineagu et al., 2009: 5-10) take into consideration the

rethinking and extension of existing data collections, by exploiting the possibilities offered by new communication tools (eg , web technologies) in terms of establishing links with users and respondents. The system of data collection from businesses is being upgraded (during the European Programme MEETS - Modernisation of European statistics regarding the enterprises and trade). It aims to create deposit (centralized storage system type) methodologies, manuals, documents useful, updated in the same manner centralized. An impediment in this regard is the way of collecting data from households, through the labor force survey, the survey on income and living conditions. This is very costly and the work is affected by reduced response rates and concerns about confidentiality. Also, as presented by some specialists (Tiron-Tudor, 2013), Ministry of Public Finance increases the responsibility of public administrations, by upgrading the computer system ForExeBug for reporting financial statements of public institutions, according to European regulations, for their use, both inside the ministry and for multi-criteria analysis and time series. The application of the method of least squares in estimating GDP leads to formulas for estimating the evolution of GDP for the coming years, or even quarterly GDP. Generally through this method are obtained good results, for estimating the periods in which the evolution of economy did not made sudden leaps from one period to another, both in terms of increasing and decreasing. Therefore, we believe that, in order to predict economic crisis, statistical approach is not sufficient, and therefore, must take into account other factors, such as: the economic cycles, the budget revisions, the inflation, the lending operation, the evolution of the application reflected in final consumption, the changes in economic and budgetary policy, environmental and social factors (in particular, those of labor market). The reduction of regional economic disparities requires a large volume of data and information on various economic issues. For this purpose, policy makers need specific regional economic tools for analyse, such as: synthetic indicators for measure the regional inequalities. The indicators used to characterize the level of development for a region are indicators of production (Regional Gross Domestic Product and Regional Gross Value Added) and indicators of income (Net Primary Income and Net Disposable Income). In order to measure regional disparities, disparity indices are determined. In the characterization process of the economic situation of Romania in terms of regional differences, we can say that there are only two regions Bucharest-Ilfov and West, which recorded in 2010 disparity indices above the national average, with 93.4% (193.4 - 100) and with 6, 4% (106.4 - 100). The limits between are located the disparity indices for other

regions, are between 78.1% and 91.2%. The North East region has the lowest disparity index for 2010 hovering with 21.9% (100 - 78.1) below the national rate.

Personal contributions

Our preoccupations to achieve this scientific approach are justified by the fact that:

- Has established own point of view regarding on clarification of the status of national accounting in general field of knowledge; we expanded the conditions which can be added to the cognition, because the micro-accounting information have greater use in the national accounting; we presented our views regarding the quality of information provide by national accounts; we had referred some characteristics and barriers in the transition from micro accounting to national accounting.
- Have been identified and defined temporal and spatial, the main landmarks and qualitative contributions made by researchers, in developing the National Accounts System; have been presented the major qualitative differences brought on the version of the European System of Accounts 2010 to version SEC 1995; in the examination of the national accounts was tried economic averages which share similar legal regulations.
- Concerning to institutional sectors, the allocation of institutional sector has been appreciated to be unjust, institutional sector "Rest of the world" because it includes the operations which take place between resident units and non-resident units, do not consists of institutional units what perform a particular function or have the resources.
- In order to the annual declaration of all unknowns' related households, we proposed the existence of a common database of the National Institute of Statistics, the MFP and local councils.
- When data collection is discussed, we *propose a closer collaboration of the NIS, the Ministry of Finance, Central Bank, FSA, employment agencies, labor, the Local Community Service of Evidence persons*; this would facilitate faster processing of the data, in order to reduce the difference between the moment of producing of economic phenomena and the moment of statistics publication, thereby contributing to the development of forecasts, much closer to reality.
- In order to prepare at regional level, the entire set of national accounts, we considered that, *the use of the ascending method would be much more suitable*, because it can create a database whose updates can be made directly by resident units through the use of IT; this would facilitate faster processing of data in order to reduce the difference between the moment of economic phenomena and the

moment of statistics publication, thereby contributing to the development of forecasts, much closer to reality.

- Through the presented mathematical model, we demonstrated that to predict the economic crisis, the statistical approach is not sufficient, it must take into account other factors.

Research limitations

The scientific approach fits within the proposed domain of research and respects the goals that were originally set. However, due to the fact that the domain of the research is actually much larger, is impossible to be covered entirely, requiring the achievement of methodological boundaries in order to realise a conducted study. After consulting the works listed as bibliographic sources and the cited studies in the domestic and international databases, we stopped out only over the most relevant aspects of the topic under investigation. We formulated a number of ideas that were inserted in the thesis. We have tried to expand other ideas, since it is almost time for the transition from SEC 1995 SEC 2010.

The transition to the version SEC 2010, represent a step ahead toward the modification of national accounting systems of the integrated countries in the European Union, which can influence a greater the need to revise theoretical and practical basis of national accounting. We believe that *a broader debate, on behalf of the new version of the national accounts system*, would be very useful to practitioners, who must quick travel on the difficult road of implementing for SEC 2010 This involves the careful monitoring of changes in regulations imposed by recognized international organizations, that are very rich in content and size (eg. Regulation 549 of 2013 on the European system of national and regional accounts from European Union includes 727 pages). Because the issue of national accounts is very vast and complex, and on the other hand, the space allocated in the present work, has obvious a limited character, was needed a selection of some relevant topics, upon which the development efforts and deepening of the author to be concentrated. Therefore, has not been allocated a place quite comprehensive for heritage accounts, quarterly accounts, satellite accounts, community accounts. Certainly each of these will be the subject of future research. We believe that these limits have not a significant effect on the achievement of the scientific approach, and do not affect the relevance of research results.

Research perspectives

In achievement the scientific approach, we tried to respond in an exhaustive manner to all the questions formulated early in the research, but we have not the claim to solve all problems which aimed at the vast area of national accounting.

We believe that, the directions for a future research are largely related to the limits of this scientific approach. Therefore, in this section, we have not the claim that we were able to identify all prospects for future research, but we try to outline some elements which have the quality of future research as guidelines, as follows:

- Exploiting the possibilities *for accurate alignment of the National Accounts System at European standards* in the field covered by the ESA 2010 version;
- The development of scientific research in the field of heritage accounts, accounts that complement the information provided by flow accounts in the same manner in which business accounting, balance sheet completes the income statement. Heritage accounts and heritage variations allow the reflection in accounts for status of assets and liabilities, held by various sectors of the national economy at a time and changes upon them every year.
- More comprehensive development for *intermediate system of enterprises*, considered to be an essential tool in the standardization and the transposition of data from microeconomic level to macroeconomic level;
- Exploiting opportunities of getting definitive data on the basis of the information it provide by the quarterly accounts, in order to eliminate the delays in producing the European and national statistics;
- For determining GDP must take into account environmental and social factors, in particular those from the labor market, by including in the NAS the accounts for environment and the social ones;
- Realization of more extensive analysis of satellite accounts, of environmental factors and social, in order to determine GDP;
- Development of opportunities for the assessment of household production;
- Identification of means of closer collaboration of the NIS, the Ministry of Finance, Central Bank, FSA, employment agencies, labor, the Local Community Service of Evidence persons, to facilitate faster processing of the data, in order to reduce the difference between the moment of producing of economic phenomena and the moment of statistics publication, thereby contributing to the development of forecasts, much closer to reality.

- The development of research, in view of possible uses, ascending method in developing regional accounts, of the method upward in developing regional accounts, which appeal directly to relevant data sources from the regional level, in order to prepare at regional level a whole set of national accounts;
- The examination of the possibility of extending and structuring databases specific to the domain of national accounting, in order to determine macroeconomic indicators, required by the analyzes and the fundamentation of decisions at macroeconomic and Community level
- The development of research for community accounts.

9. SELECTIVE REFERENCES

SPECIALIZED BOOKS

1. Achim M.V., (2009), *Analiza economico-financiară*, Risoprint Publisher, Cluj-Napoca
2. Achim S.A., (2009), *Contabilitate pentru manageri*, Risoprint Publisher, Cluj-Napoca
3. Anghelache C. & Capanu I., (2003), *Indicatori macroeconomici Calcul și analiză economică*, Economic Publisher, Bucharest
4. Anghelache C., Isaic-Maniu A., Mitruț C. & Voinag V., (2005), *Sistemul Conturilor Naționale*, 2end Edition, Economic Publisher, Bucharest
5. Anghelache C., Isaic-Maniu A., Mitruț C., Voineagu V., Dumbravă M. & Manole A., (2006a), *Analiză macroeconomică Teorie și studii de caz*, Economic Publisher, Bucharest
6. Anghelache C., Bugudui E., Gresoiu S. & Niculescu E., (2006b), *Statistică aplicată Indicatori, sinteze și studii de caz*, Economic Publisher, Bucharest
7. Anghelache C., Isaic-Maniu A., Mitruț C. & Voinag V., (2007), *Sistemul Conturilor Naționale*, 2end Edition, Economic Publisher, Bucharest
8. Anghelache C., Mitruț C & Voineagu V., (2010), *Sistemul Conturilor Naționale – Sinteze și studii de caz*, Economic Edition, Bucharest
9. Anghelache C., Isaic-Maniu A.L., Mitruț C. & Voineagu V., (2011), *Sistemul contu-rilor naționale sinteze și studii de caz*, Economic Edition, Bucharest
10. Archambault E., (1982), *Comptabilité nationale*, Économica Publisher, Paris
11. Begu L.S., (2009), *Statistică internațională (Analize comparative)*, Universitară Publisher, Bucharest
12. Biji M., Biji E. M., Lilea E. & Anghelache C., (2002), *Tratat de statistică*, Economic Publisher, Bucharest
13. Bentoiu C. & Bălăceanu C., (2007), *Macroeconomie*, C.H.Beck Publisher, Bucharest
14. Bentoiu C., Bălăceanu C. & Mărgineanu D., (2009), *Macroeconomie Aplicații*, 2end Edition, C.H. Beck Publisher, Bucharest
15. Bernard J., (1972), *Comptabilité nationale et modèles de politique économique*, Presse Universitaire de France Publisher (PUF), Paris
16. Blaga A., Mureșan P.S. & Lupaș A., (1999), *Matematici aplicate*, vol. 1, Promedia Plus Publisher, Cluj-Napoca
17. Blonde M.H., (1998), *Systeme de la comptabilité nationale*, INSEE, Paris

18. Bodea G., Ban I., Rovinaru F. & Salanță M., (2005), *Aplicații de micro și macro-economie*, Risoprint Publisher, Cluj-Napoca
19. Boussard D. & Eglem J. Y., (1990), *Les mécanismes comptables de l'entreprise*, Montchrestien Publisher, Paris
20. Brezeanu P., Ristea L., Fotache G., Trandafir A. & Boiengiu T., (2007), *Macro-finanțe*, Meteor Press Publisher, Bucharest
21. Capanu I., Wagner P. & Mitruț C., (1994), *Sistemul conturilor naționale și agregate macroeconomice*, All Publisher, Bucharest
22. Capanu I., Wagner P. & Secăreanu C., (1997), *Statistica macroeconomică*, Economic Publisher, Bucharest
23. Capanu I. & Anghelache C., (2001), *Indicatori macroeconomici conținut, metodologie de calcul și analiză economică*, Economic Publisher, Bucharest
24. Castex P., (1991), *Analyse macrocomptable et comptabilité nationale*, Économica Publisher, Paris
25. Ciobanu G., Popescu G., Ghișoiu M., Bodea G. & Cocio P., (2006), *Macroeconomie*, Imprimeria Ardealul Publisher, Cluj-Napoca
26. Ciobanu G., Popescu G., Ghișoiu M., Bodea G. & Cocio P., (2009), *Macroeconomie*, Imprimeria Ardealul Publisher, Cluj-Napoca
27. Ciucur D., Gavrilă I. & Popescu C., (2001), *Economie*, 2end Edition, Economic Publisher, Bucharest
28. Crețoiu G., Cornescu V. & Bucur I., (2011), *Economie*, 3rd Edition, C.H.Beck Publisher, Bucharest
29. Criveanu M., (2002), *Contabilitate națională*, Scrisul Românesc Publisher, Craiova
30. Colasse B., (2000), *Encyclopédie de comptabilité, contrôle de gestion et audit*, Économica Publisher, Paris
31. Constantin D.L., (2004), *Elemente fundamentale de economie regională*, ASE Publisher, Bucharest
32. Deaconu A., (2009), *Valoarea justă. Concept contabil*, Economic Publisher, Bucharest
33. Dornbusch R., Fischer S. & Startz R., (2007), *Macroeconomie*, Economic Publisher, Bucharest
34. Dumbravă P., Bătrâncea L.M., (2008), *Management contabil*, Risoprint Publisher, Cluj-Napoca
35. Dumbravă P., Berinde S., Bătrâncea L.M., Răchișan R.P. & Pop I., (2010), *Contabilitatea managerială de gestiune*, Alma Mater Publisher, Cluj-Napoca
36. Feleagă N., (2000), *Sisteme contabile comparate*, 2end Edition, vol.II - Norme contabile internaționale, Economic Publisher, Bucharest
37. Galbraith J.K., (1982), *Știința economică și interesul public*, Politică Publisher, Bucharest
38. Gilbert A.F., (1994), *Economia politică*, Humanitas Publisher, Bucharest
39. Gisberto-Chițu A. & Vuță M., (1999), *Sistemul conturilor naționale Teorie și practică*, ASE Publisher, Bucharest
40. Gisberto-Chițu A., (2003), *Contabilitatea micro și macroeconomică*, 2end Edition, CECCAR Publisher, Bucharest
41. Hormonea E., Tabară N., Budugan D., Georgescu I. & Bețianu L., (2008), *Bazele contabilității Concept. Modele. Aplicații*, 3rd revised Edition, Sedcom Libris Publisher, Iași
42. Hormonea E., (2008), *Fundamentele științifice ale contabilității. Doctrină. Concepte. Lexicon.*, Tipo Moldova Publisher, Iași
43. Hovard K., Sharp J.A., (1983), *The management of a student research project*, Aldershot, Gower
44. Ionașcu I., (1995), *Contabilitate națională*, Economic Publisher, Bucharest
45. Ionescu T., (1999), *Istoria gândirii economice universale și românești*, Sarmis Publisher, Cluj-Napoca
46. Ivan-Ungureanu C., (2003), *Contabilitatea națională. Concepte, metodologii și aplicații*, Irecson Publisher, Bucharest

47. Keynes J.M., (1970), *Teoria generală a folosirii mâinii de lucru, a dobânzii și a banilor*, Scientific Publisher, Bucharest
48. Labaronne D., (2001), *Comptabilité nationale La nouvelle base*, Édition du Seuil Publisher, Paris
49. Leontieff W., (1970), *Analiza input-output*, Scientific Publisher, Bucharest
50. Lequiller F., Blades D., (2007), *Understanding National Accounts*, OECD Publishing, Paris, downloaded from: <http://dx.doi.org/10.1787/9789264027657-en>, at 25.03.2014
51. Manea M.D., (2012), *Contabilitatea instituțiilor publice*, C.H. Beck Publisher, Bucharest
52. Malciu L., (1998), *Cererea și oferta de informații contabile*, Economic Publisher, Bucharest
53. Marczewski J., (1967), *Comptabilité nationale*, 2éme Edition, Dalloz Publisher, Paris
54. Mățiș D., Pop A., Pântea P.I., Cardoso V., Fătăcean G., Dumbravă P., Achim S., Groșanu A., Mureșan M., Filip C., Müller V.O., Sucală L., Nistor C., Popa I., Mustață R., Ienciu A., Tiron-Tudor A., Muțiu A., Pete Ș., Fekete S., Ildiko V & Bonaci C., (2008), *Contabilitate financiară*, 2end Edition, Casa Cărții de Știință Publisher, Cluj-Napoca
55. Mățiș D., Pop A., Bonaci C.G., Mureșan L.M., Deaconu A., Oprean V.B., Popa I. E., Achim A.S., Groșanu A., Filip C., Müller V.O., Pete Ș., Nistor C.S. & Ienciu A.I., (2010), *Bazele contabilității Fundamente și premise pentru un raționament profesional autentic*, Casa Cărții de Știință Publisher, Cluj-Napoca
56. McQueen A.R., Knussen C., (2006), *Metode de cercetare în științele sociale*, Institutul European Publisher, Academic Collection, Iași
57. Morariu A. & Suciug., (2004), *Contabilitatea instituțiilor publice*, Universitară Publisher, Bucharest
58. Mustață R.V. (2008), *Sisteme de măsurare a armonizării și diversității contabile – între necesitate și spontaneitate*, Casa Cărții de Știință Publisher, Cluj-Napoca
59. Muzellec R. (1993), *Finances Publiques*, Dalloz Publisher, Paris
60. Negucioiu A., Drăgoescu A. & Pop S., (1998), *Economie politică*, Volume II, G.Barițiu Publisher, Cluj – Napoca
61. Nicoară M., (2005), *Sistemul Conturilor Naționale*, Risoprint Publisher, Cluj-Napoca
62. Nistor I. L., (2009), *Prognoza macroeconomică*, Alma Mater Publisher, Cluj-Napoca
63. Oprea C. & Ristea M., (2004), *Bazele contabilității*, Didactică și pedagogică Publisher, R.A., Bucharest
64. Pântea I.P. & Pop A., (1992), *Contabilitatea generală a economiei de piață*, Dacia Publisher, Cluj-Napoca
65. Pântea I.P. & Bodea G., (2006), *Contabilitate financiară românească conformă cu Directivele europene*, Intelcredo Publisher, Deva
66. Perochon C., (1981), *Comptabilité générale techniques quantitatives de gestion*, Fou-cher Publisher, Paris
67. Petschen S., (1993), *L'Europe des regions*, Institut d'Etudes Autonomes, Barcelona
68. Pichot A., (1992), *Les Comptabilités Nationales*, Presse Universitaire de France Publisher (PUF), Paris
69. Piriou J.P., (2006), *La comptabilité nationale*, Quatorzième edition conforme à la nouvelle base 2004, La Découverte Edition, Paris
70. Pop A., (1997), *Contabilitatea Națională a României*, Intelcredo Publisher, Deva
71. Pop V., (2005), *Sistemul Contabilității Naționale*, Convex Publisher, Oradea
72. Popa I., E., Garcia F.J.M., Cardoso V.D., Ienciu A.I., Șpan G.A. & Montoya del Corete, J., (2011), *Bazele contabilității, Aplicații practice în entitățile din România*, Intelcredo Publisher, Deva
73. Popangă G. & Slusariuc G., (2002), *Contabilitate națională*, Focus Publisher, Petroșani
74. Popescu C., Ciucur D., Răboacă G., Iovan D., (2006), *Metodologia cercetării științifice economice*, ASE Publisher, Bucharest
75. Postelnicu G., (1998), *Nobel pentru economie*, Napoca Star Publisher, Cluj-Napoca

76. Rădulescu M.Ș., (2011), *Metodologia cercetării științifice*, elaborarea lucrărilor de licență, masterat, doctorat, 2nd Edition, Didactică și Pedagogică Publisher, Bucharest
77. Ristea M., (2005), *Contabilitatea financiară*, Universitară Edition, Bucharest
78. Say J.B., (1972), *Traité d'économie politique*, Calman-Lévy Publisher, Paris
79. Stancu S. & Mihail N., (2009), *Macroeconomie Modele statice și dinamice de com-portament Teorie și aplicații*, Economic Publisher, Bucharest
80. Sucală L., (2002), *Contabilitate și fiscalitate*, Casa Cărții de Știință Publisher, Cluj-Napoca
81. Ștefan M.C., (2008), *Dezvoltare regională și locală*, Economic Publisher, Bucharest
82. Tabară N. (1997), *Contabilitatea națională*, 2nd Edition, Moldova Publisher, Iași
83. Tabără N., (2003), *Contabilitate națională*, Tipo Moldova Publisher, Iași
84. Tabară N., (2008), *Contabilitatea națională. Concepte. Sisteme. Modele*, Tipo Moldova Publisher, Iași
85. Teulon F., (2009), *Initiation à la comptabilité nationale*, Press Universitaires de France, Paris
86. Țigănescu I.E. & Roman M.D., (2005), *Macroeconomie*, Economic Publisher, Bucharest
87. Vanoli A., (2002), *Un histoire de la comptabilité nationale*, La Découverte, Paris
88. Walpole R.E., Myers R.H., (2007), *Probability & Statistics for Engineers and Scientist*, Pearson Prentice Hall

ARTICLES PUBLISHED IN JOURNALS/ SPECIALTY MAGAZINES OR CONFERENCE PROCEEDINGS REALIZED AT NATIONAL AND INTERNATIONAL LEVELS

1. Albu L.L., Kim B.Y. & Duchene G., (2002), Households Activities in Informal Eco-nomy: Size and Behavioural Aspects, *Romanian Journal of Economic Forecasting*, 3 (3-4) , p. 18-28, The Institute for economic forecasting, Bucharest
2. Albu C.N., Albu N., Gîrbină M.M., Bonaci C., Mustață R.M., (2011), Financial Re-orting in Romania, Harmonization of SME's Financial Reporting in Emerging CEE Countries, World Scientific and Engineering Academy and Society Press (WSEAS) Press, p.217-262, downloaded from: <http://www.wseas.us/e-library/conferences/2011/Strouhal/Strouhal.pdf#page=228>, at 20/01/2014
3. Albu N., Albu C., Bunea Ș., Calu D.A. & Gîrbină M.M., (2011), A story about IAS/ IFRS implementation in Romania, An institutional and structuration theory perspective, *Journal of Accounting in Emerging Economies*, 1 (1), p. 76-100
4. Angelescu P., (2008), Se umblă la indici de consum, *Curierul Național*, edition from 18 january 2008
5. Anghelache C., (2011), Analiza corelației între PIB și consumul final, *Economie teoretică și aplicată*, XVIII, No. 9 (562), p.84-93, AGER, Bucharest, downloaded from: http://www.store.ectap.ro/articole/641_ro.pdf, at 16/03/2014
6. Anghelache C. & Dumitrescu C., (2013), Evoluția produsului intern brut al României, *Revista Română de Statistică* no1, p. 86-93, NIS, Bucharest
7. Asheim G. B., (1994), Net National Product as an Indicator of sustainability, *The Scandinavian Journal of Economics* 96 (2), p. 257-265, downloaded from: <http://folk.uio.no/gasheim/A-SJE94.pdf>, at 16/04/2014
8. Asheim G. B. & Hartwick J.M., (2011), Anomalies in green national accounting, *Elsevier Journal*, vol. 70 (12), p. 2303-2307, downloaded from: <http://www.duo.duo.uio.no/bitstream/handle/10852/35426/anogna03.pdf>, at 15/03/2014
9. Barbu E.M., (2002), Calitățile intrinseci ale valorii juste puse sub semnul întrebării, *Revista Contabilitatea, expertiza și auditul afacerilor*, no. 6, p. 25-30

10. Berge S. & Villers J., (2001), Namea-National Accounting Matrix including Environmental Accounts, in *Comptes nationaux environnementaux. Outil d'un politique de développement durable*, Planning Paper 90, Bureau fédéral du Plan, 2001, Belgique, downloaded from: <http://www.plan.be/admin/uploaded/200605091448068.PP090fr.pdf>, at 06/05/2014
11. Blades D., (1999), The Recent Period of the IARIW, 1988 to 1998, *Review of Income and Wealth* 45 (3), p. 409-417
12. Brown S., Howard K., Jones S. & Spencer U., (2006), Guide to Economic Indicators Making sense of Economics, *The Economist*, sixth Edition, p. 219, published by Profile Books Ltd, London
13. Buda R., (1995), Abrégé de comptabilité nationale, MPRA, No. 4164, p. 3-37, *Do-cument de Cours*, Université de Marne-la-Vallée, downloaded from: mpra.ub.uni-muenchen.de/.../MPRA_paper_4164.pdf, at 12/04/2014
14. Carson C.S., (1999), 50-Year Retrospective of the IARIW: The Early Years, *Review of Income and Wealth*, 45 (3), p. 379-396
15. Chițu A. G., Chițu A., (2006a), Micro și macroeconomia-Importanța cunoașterii acesteia și a mecanismelor de funcționare, *Analele Universității din Oradea Științe economice*, II (1582-5450), p. 126-131 downloaded from: <http://steconomiceuora.dea.ro/anale/volume/2006/finante-contabilitate-si-banci/18.pdf>, at 14/03/2014
16. Chițu A. G., Chițu A., (2006b), Modele de prezentare a circuitului economic de an-samblu al economiei naționale, *Analele Universității din Oradea Științe economice*, II (1582-5450), p. 132-139 downloaded from: <http://anale.steconomiceuora.dea.ro/volume/2006/finante-contabilitate-si-banci/18.pdf>, at 14/03/2014
17. Chauvin V. (2000), Les comptes nationaux s'accordent entre eux. Modification de la comptabilité nationale en France, *Revue de l'OFCE. N° 72*, p. 157-183
18. Ciuchea A., Caragea S. & Drăgușin L., (2008), Conturile naționale nefinanciare în România, *Revista Română de Statistică nr. 3*, p.67-78, NIS, Bucharest
19. Cobb C., Douglas P., (1928), A Theory of Production, *American Economic Review (Supplement)*, 18, p. 139-165
20. Costuleanu C.L., (2011), National Accounting as a branch of accounting, *Revista Economică*, no. 6(59), vol. I, p. 163-167, Universitatea Lucian Blaga, Sibiu
21. Dietzenbacher E., Tukker, A. (Eds.), (2013), Global multiregional Input Output frameworks. Special Issue, *Economic Systems Research*, 25(1), p. 1-156
22. Deaconu A., (2001), Valoarea de piață diferite accepțiuni prezentate în standardele contabile și în cele de evaluare a activelor, *Revista Contabilitatea, expertiza și auditul afacerilor nr. 8*, CECCAR Publisher, Bucharest
23. Deaconu A., (2004), Valoarea justă – cerință a convergenței contabile, *Congresul profesiei contabile din România. Armonizare sau Convergență în Standardele Internaționale de Contabilitate*, p. 195-206, 3-4 septembrie, CECCAR Publisher, Bucharest
24. Dumbravă P. & Bătrâncea L.M., (2014), Abordări doctrinale și empirice privind bugetele de venituri și cheltuieli pentru entitățile din economia românească, *Revista Contabilitatea expertiza și auditul afacerilor*, no.5, May 2014, CECCAR Publisher, Bucharest
25. Ebril L. K., Bodin M., Summers J.P., (2002), L'attrait de la taxe sur la valeur ajoutée, *Finance & Développement* 39 (3), June 2002, FMI
26. Friboulet J.J., (2004), La comptabilité nationale: une histoire révélatrice des Transformations de l'économie, *Chaire d'Histoire et de Politique Economique*, Faculty of Economics and Social Sciences, Université de Fribourg, No. 382, downloaded from: <http://www.unifr.ch/heed/assets/files/Wp04%20-%20J.lite%20nationale.pdf>, at 07/01/2014

27. Ghizdeanu I., Bria T. & Țapu, D.I., (2008), Conturile naționale pe sectoare instituționale, *Revista Română de statistică* no 7, p. 3-11, NIS, Bucharest
28. Ghizdeanu I., Stanică C. & Ristea C., (2007), Utilizarea bilanțurilor contabile în analiza și prognoza macroeconomică, *Working Papers of Macroeconomic Modeling Seminar 071401*, Institute for Economic Forecasting, downloaded from: <http://www.ipe.ro/RePRc/WorkingPapers/cs14-1.pdf>, at 14/03/2014
29. Herath G., (2005), Sustainable development and environmental accounting: the challenge to the economics and accounting profession, downloaded from: <http://www.emerliddinsight.com/Insight/viewContentItem.do;jsessionid98E74701BAF2D7EF6056FC5A594A257?contentType=Article&contentId=1528597>, at 21.01.2014
30. **Iica M.**, (2006), Armonizarea legislației fiscale românești cu acquis-ul comunitar, *Revista Gândire, Cultură & Societate*, no. 2, p. 155, EIKON Publisher, Cluj-Napoca
31. **Iica M.** & Ienachi V., (2007), The agregate and numerical description of economic life through the result ratios calculated in SCN, *The International Conference Competitiveness and European Integration-Quantitative Economics- Cluj-Napoca România*, p. 58-67, Alma Mater Publisher, Cluj-Napoca
32. Ienachi V., **Iica M.**, Pop M., (2007), Infomation management in the context of european integration –competitivity premise – considerations, *The proceedings of the international conference competitiveness and european integration*, october 26-27, p. 180-182, Cluj – Napoca, Romania, Universitatea Babes-Bolyai, FSEGA, Business information systems & collaborative support systems in business, Cluj – Napoca
33. **Iica M.**, (2007), Contabilitatea națională – teorie și practică socială, *Expuneri la Sesiunea științifică anuală 26-27 octombrie 2007*, Academia Română filiala Cluj-Napoca, Institutul de istorie “George Bariț”, Departamentul de cercetări socio-umane, Cluj-Napoca
34. **Iica M.**, (2008), IFRS1 – Adoptarea pentru prima dată a standardelor de raportare, *Revista Gândire, Cultură & Societate*, no. 3, p. 36, EIKON Publisher, Cluj-Napoca
35. **Iica M.**, (2009), The content of the Input - Output tables, *Conferința națională – Modele cantitative aplicate în economie*, Catedra de Statistică, Previziuni, Matematică”, Universitatea Babes-Bolyai, Facultatea de Științe Economice și Gestiunea Afacerilor, Cluj-Napoca, 15-16 may 2009
36. **Iica M.** & Popa D., (2014), On approximate Coob-Douglas production functions, *Carpathian J.*, 30 (1), p. 87-92, downloaded from : <http://carpathian.ubm.ro/issues/absbjm301007-014.pdf>
37. Ivan C., (2000), Non-Observed Economy In Romania, *Romanian Journal of Economic Forecasting*, 1 (3), p. 75-84, The Institute for economic forecasting, Bucharest
38. Jorgenson D.N., (2009), A New Arhitecture for the US National Accounts, *Review of Income and Wealth*, No. 55, p.1-42, USA
39. Landefeld J.S. & McCulla S.H., (2000), Accounting for nonmarket household production within a national acconts framework, *Review of Income and Wealth*, 46 (3), September.
40. Littleton A.C., (1958), Accounting rediscovered, *The accounting review*, 33 (2), p. 246-253, Published by American Accounting Association, USA
41. Marcou G., (1999), La regionalisation en Europe, *Regional Policy series Working paper REGI 108 A XX/rev. 1*, p 51, downloaded from: <http://www.univ-paris1.fr/fileadmin/GRALE/PEregional1.pdf>
42. Mateliu V., (1999), Les comptes des secteurs institutionnelles, de la basse 80 ála basse 95, *Revue Economic et statistique*, No. 321-322, p. 31-35
43. Mateș D. & Șteț M., (2006), Standardizarea sistemelor contabile contemporane în condițiile globalizării, *Annales Universitatis Apulensis seria Oeconomica*, 1(8), Finanțe-Contabilitate, downloaded from: <http://www.oeconomica.uab.ro/upload/lucrari/820061/16.pdf> at 26/03/2014

44. Mătiș D., (2000), Calități și limite ale informațiilor contabile, *Studia Universitatis Babeș Bolyai Oeconomica*, no. 1, p. 31-40, Cluj-Napoca
45. Mătiș D.,(2005), Armonizare și convergență contabilă internațională, *Probleme actuale ale gândirii, științei și practicii economico-sociale*, Risoprint Publisher, Cluj-Napoca
46. Mătiș D. & Fătăceanu G., (2006), Sistemul contabil al valorilor mobiliare, în *Analele facultății, seria Științe economice* no. 2/2006, Universitatea Creștină Dimitrie Cante-mir, Cluj-Napoca
47. Munteanu M., (2002), Cunoașterea în contabilitate între doxă și episteme, *Revista Contabilitatea, Expertiza și Auditul Afacerilor*, no. 9, p. 10, CECAR Publisher, Bucharest
48. Mustăreacă M., Chirca C., Neagu C., Alexandru M., & Nicolae N., (2012), Statistici pentru un mediu economic în schimbare, *Caiet de studii* nr. 31, BNR, downloaded from: <http://www.bnr.ro/files/d/Pubs.ro/Caiete2012cs31.pdf>, at 04/03/2014
49. Negescu M.D., (2004), Caracteristicile informației financiare în contextul evoluțiilor contemporane, *Revista Contabilitate și informatică de gestiune* no. 9, ASE Publisher, Bucharest
50. Neagu S., (2003), Euroregiunile – un pas necesar spre integrarea europeană, *Jurnalul Economic*, anul VI no.11-12 july, Bucharest
51. Păvăloaia W. & Tugui A., (1994), Rate economico-financiare și solduri intermediare de gestiune, *Tribuna Economică*, No. 26, Bucharest
52. Pyatt G. & Round J.J., (1977), Social Accounting Matrices for Development Planning, *Review of Income and Wealth* 23 (4), p. 339-364
53. Pioaru R. A., (2005), *Consumul final al statului și consumul total pe economie*, *Supliment ziarul Economistul*, no. 462 from 01.08.2006, p. 1-2
54. Pioaru R.A., (2006), Conceptul privind apariția și evoluția contabilității naționale, *Simpozion științific octombrie, Economia României în perspectiva aderării la Uniunea Europeană*, p. 193-201, Artifex Publisher, Bucharest
55. Poissonnier A. & Roy D., (2013), Households Satellite Account for France in 2010. Methodological issues on the assessment of domestic production, *Série des documents de travail*, G 2013/14, p. 1-52, Institut National de la Statistique et des Études Économiques (INSEE), downloaded from: http://www.insee.fr/fr/publications-et-services/docs_doc_travail/G2013-14bis.pdf, at 14/03/2014
56. Popescu L., Nemeș C., **Ica M.**, (2006), Comerțul internațional contemporan. Conținutul. Funcțiile. Instrumentele și indicatorii de evaluare, *Revista Gândire, Cultură & Societate*, no. 2, p. 76, EIKON Publisher, Cluj-Napoca
57. Sérurier M., (2009), Mesurer l'économie informelle dans le cadre de la comptabilité nationale, *Stateco N° 104*, p. 45-66, Institut de recherche pour le développement IRD, Paris, downloaded from: http://www.dial.prd.fr/dial_publication/PDF/stateco/stateco104/serurier.pdf, at 04.04.2014
58. Roche C. O., (2011), Understanding the Modern Monetary System, *Social Science Research Network*, downloaded from: <http://dx.doi.org/10.2139/ssrn.1905625>, at 05/03/2014
59. Ruggles R., (1999), The Middle Years of the International Association for Research in Income and Wealth, 1962-1987, *Review of Income and Wealth*, 45 (3), p. 397-40
60. Stănică C.N., (2011), Evaluarea și proiecția indicatorilor macroeconomici pe baza conturilor sectoarelor instituționale, *Revista Română de statistică*, no. 9, p. 9-22, INS, București, downloaded from: http://www.revistadestatistica.ro/old/Revista/2011/sumar%2009_2011.pdf, at 17/03/2014
61. Stăneanu G. & **Ica M.**, (2008), Studiu privind finanțarea și creditarea investițiilor internaționale directe în România, *Revista Gândire, Cultură & Societate*, no 3, p. 55, EIKON Publisher, Cluj-Napoca
62. Stone R., (1986), Nobel Memorial lecture 1984, The accounts of society, *Journal of Applied Econometrics*, in *The American Economy Review* vol.1, p.5-28

63. Suzuki T., (1998), Accounting and economics: the Keynesian revolution from, *Accounting point of view*, version. 1.1.1., May 1998, Ed. Balliol College, University of Oxford the Second Asian Pacific Interdisciplinary Research in Accounting Conference (4-6 August 1998. Osaka, Japan)
64. Tabără N., (2001), Tabloul operațiunilor financiare, *Revista Română de Statistică*, no 2, NIS, Bucharest
65. Tiron Tudor A., (1995), Consolidarea conturilor – necesitate a contabilității româ-nești, *Conferința Științifică Internațională Economia românească – criză, adaptare, integrare europeană*, vol. 1 I., p. 220-222, Continent Publisher, Sibiu
66. Tiron Tudor A., (2013), Implicația profesiei contabile în sectorul public, expuneri la Conferința Internațională *Implicarea profesiei contabile în dezvoltarea calității raportărilor financiare din sectorul public, 8 novembre 2013*, CECCAR Publisher, Bucharest
67. Toma C.,(2003),Evaluarea la costul istoric și imaginea fidelă, *Revista Contabilitatea, expertiza și auditul afacerilor*, no 9, p. 20-26.
68. Touchelay B., (2010), Le développement de la normalisation comptable et de la comptabilité nationale en France entre les années 1920 et les années 1960, des analogies singulières, *1^{se} Journées d'Histoire de la Comptabilité et du Management*, Université Paris-Dauphine, downloaded from: http://hal.archivesouvertes.fr/docs/00/46/60/11/PDF/Touchelay_Normalisation_comptable_et_comptabilite_nationale_1920-1960_.pdf, at 04/03/2014
69. Țopa V., (2005), Cercetarea științifică din România între a fi sau a nu fi, downloaded from: <http://www.ad-astra.ro/library/papers/topa.pdf>, at 16/04/2014
70. Wagner P. & Mitruț C., (1990), Agregate macroeconomice calculate în statistica internațională, *Revista Română de Statistică*, no 8-9, NIS, Bucharest
71. Vanoli A., (1999), Interest and Inflation Accounting, *Review of Income and Wealth*, (45) 3, p. 295 US
72. Vanoli A., (2010a), Is National Accounting Accounting? National Accounting between Accounting, Statistics and Economics, *Comptabilités.Revue d'histoire des comptabilités*, downloaded from: <http://comptabilites.revues.org/pdf/226>, at 02/03/2014
73. Vanoli A., (2010b), The new architecture of the U.S. National Accounts and its relationship to the SNA, 56 (4) , p. 734-751, december, *Review of Income and Wealth*, USA
74. Varujan V., (2008), Prognoza PIB pentru 2008 va fi revizuită în creștere, article published in 24 sept 2008, *dailybusiness RSS - resursă online de afaceri*, downloaded from: www.dailybusiness.ro, at 17/03/2014
75. Văduva M., (2011), Indicatori macroeconomici utilizați în comparații internaționale, *Analele Universității Constantin Brâncuși*, Seria Economie no. 2, p. 232-241, Târgu Jiu
76. Voineagu V., Ștefănescu D., Dimitrescu I., (2009), Orientări strategice ale Sistemului Statistic European, in *Revista Română de Statistică* no 5, p. 5,9,10, NIS, Bucharest

PUBLICATIONS OF PROFESSIONAL BODIES

1. BNB, (2010), *Comptes régionaux 1998 - 2008*, L'Institut des comptes nationaux Banque Nationale Belgique a publié 17 mars 2010, Bruxelles
2. BNB, (2013), *Comptes régionaux éléments conceptuels et méthodologiques*, Dernière modification a publié 17 mars 2013, L'Institut des comptes nationaux Banque Nationale de Belgique, Bruxelles downloaded from: http://www.nbb.be/doc/dq/f_method/M_meth2013F.pdf, at 16/03/2014
3. BNR, (2009), *Conturi Naționale Financiare 1998-2008*, Bucharest, downloaded from: <http://www.bnro.ro/PublicationDocuments.aspx?icid=9703>, at 17.04.2014

4. BNR, (2010), *Conturi Naționale Financiare 1998-2009*, Bucharest, downloaded from: <http://www.bnro.ro/PublicationDocuments.aspx?icid=9703>, at 17.04.2014
5. BNR, (2011), *Conturi Naționale Financiare 2006-2010*, Bucharest, downloaded from: <http://www.bnro.ro/PublicationDocuments.aspx?icid=9703>, at 17.04.2014
6. BNR,(2012a),*Conturi Naționale Financiare 2007-2011*,Bucharest,downloaded from: <http://www.bnro.ro/PublicationDocuments.aspx?icid=9703>, at 17.04.2014
7. BNR, (2012b), Raport anual 2011, Bucharest
8. BNR, (2013a),*Conturi Naționale Financiare 2008-2012*, Bucharest, downloaded from:<http://www.bnro.ro/PublicationDocuments.aspx?icid=9703>, at 17.04.2014
9. BNR, (2013b), Raport anual 2012, Bucharest
10. CE, (1996), Regulamentul (CE) nr. 2223/96 al Consiliului din 25 iunie 1996 privind Sistemul European de conturi naționale și regionale din Comunitate, *Jurnalul Oficial L 310*, 30.11.1996, downloaded from: <http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=CONSLEG:1996R2223:20030807:RO:PDF>,at 14/03/2014
11. CE, (2003), Regulamentul (CE) nr. 1059/ 2003 al Parlamentului European și al Consiliului din 23 mai 2003 privind instituirea unui nomenclator comun al unităților teritoriale de statistic (NUTS), *Jurnalul Oficial al Uniunii Europene nr. L 154/2003*, modificat prin Regulamentul (CE) nr. 178/2008 al Parlamentului European și al Consiliului din 20 februarie 2008, downloaded from: <http://eurlex.europa.eu/LexUriServ.do?uri=Consleg:2003R1058:20080306:RO:PDF>, at 14/03/2014
12. CE, (2011), Regulamentul (UE) no. 691/2011 al Parlamentului European și al Consiliului din 6 iulie 2011 privind conturile economice de mediu europene
13. CE, (2013), Regulamentul (UE) nr. 549/2013 al Parlamentului European și al Consiliului din 21 mai 2013 privind Sistemul european de conturi naționale și regionale din Uniunea Europeană, publicat în *Jurnalul Oficial al Uniunii Europene* 174, anul 56, 26 iunie, Bruxelles, downloaded from: <http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:174:0001:01:RO:HTML>,at 03.01.2014
14. CNP, (2008), *Proiecția principalilor indicatori macroeconomici pentru perioada 2008 – 2013*, prognoza de primăvară varianta finală, 25 april 2008, Bucharest
15. EUROSTAT, (2010), *Europe in figures – Eurostat Yearbook 2009*, Office for Official Publications of the European Communities, 2009 edition, Luxembourg downloaded from: epp.eurostat.ec.europa.eu/cache/TTY_OFFPUB/KS-CD-001/EN/KS-CD-09-EN.PDF, at 10.04.2013
16. EUROSTAT, (1995), European System of Accounts (ESA 1995), Office for Official Publications of the European Communities, Luxembourg
17. EUROSTAT, (1979), *Système Européen de Comptes, Économiques Intégrés SEC*, 2 edition, Eurostat, Luxembourg
18. EUROSTAT, (2008a), *Regions of the European Union A statistical portrait-2009*, Statisticalbooks, Eurostat, European Communities, downloaded from: http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-HA-08-001/EN/KS-HA-08-001-EN.PDF, at 11/12/2012
19. EUROSTAT (2008b), *Eurostat Manual of Supply, Use and Input–Output Tables*, Office for Official Publications of the European Communities, Luxembourg
20. EUROSTAT, (2008c), *Regions of the European Union A statistical portrait-2009*, Statisticalbooks, Eurostat, European Communities, downloaded from: http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-HA-08-001/EN/KS-HA-08-001-EN.PDF, at 11/12/2009
21. EUROSTAT, (2013a), downloaded from: http://epp.eurostat.ec.europa.eu/portal/page/portal/esa_2010/documents/Manual_ChangeESA95_ESA2010.pdf, at

- 03/01/2014
22. EUROSTAT, (2013b), European system of accounts - ESA 2010, *Publications Office of the European Union*, Luxembourg, downloaded from: http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-02-13-269/EN/KS-02-13269-EN.PDF, at 07/01/2014
 23. NIS, (1994), *Expuneri prezentate la seminarul Conturile Naționale în analiza și previziunea macroeconomică*, Comisia Națională pentru Statistică, Bucharest
 24. NIS, (2006), *Romanian Statistical Yearbook*, downloaded from: http://www.insse.ro/cms/files/Anuar%20arhive/serii%20de%20date/2006/ASR_2006.pdf at 12/04/2011
 25. NIS, (2007a), *Conturi Nationale 2003-2004*, Bucharest
 26. NIS, (2007b), *Conturi Naționale, Regionale 1998-2004*, Bucharest
 27. NIS, (2008), *Conturi Nationale 2004-2005*, Bucharest
 28. NIS, (2009a), *Anuarul statistic al României 2009*, Bucharest
 29. NIS, (2009b), *Conturi Nationale 2005-2006*, Bucharest
 30. NIS, (2009c), *Conturi Naționale, Regionale 2002-2006*, Bucharest
 31. NIS, (2009d), *Repere economice și sociale Statistică teritorială 2009*, Bucharest
 32. NIS, (2010a), *Anuarul statistic al României 2010*, Bucharest
 33. NIS, (2010b), *Conturi Nationale 2006-2007*, Bucharest
 34. NIS, (2010c), *Conturile Naționale regionale 2002-2007*, Bucharest
 35. NIS, (2010d), *Repere economice și sociale Statistică teritorială 2010*, Bucharest
 36. NIS, (2011a), *Anuarul statistic al României 2011*, Bucharest
 37. NIS, (2011b), *Conturi Nationale 2007-2008*, Bucharest
 38. NIS, (2011c), *Conturile Naționale regionale 2003-2008*, Bucharest
 39. NIS, (2011d), *Coordonate ale nivelului de trai în România veniturile și consumul populației 2010*, Bucharest
 40. NIS, (2011e), *Economia mondială în cifre 2011*, Bucharest
 41. NIS, (2011f), *Forța de muncă în România ocupare și șomaj anul 2010*, Bucharest
 42. NIS, (2011g), *Repere economice și sociale Statistică teritorială 2011*, Bucharest
 43. NIS, (2011h), *Starea economică și socială a României 2008 și 2009*, Bucharest
 44. NIS, (2012a), *Anuarul statistic al României 2012*, Bucharest
 45. NIS, (2012b), *Conturi Nationale 2008-2009*, Bucharest
 46. NIS, (2012c), *Conturile Naționale regionale 2008-2009*, Bucharest
 47. NIS, (2012d), *Repere economice și sociale Statistică teritorială 2012*, Bucharest
 48. NIS, (2013), *Anuarul statistic al României 2013*, Bucharest
 49. NIS, (2013), *Conturi naționale 2009-2010*, Bucharest
 50. NIS, (2013), *Conturile Naționale regionale 2008-2010*, Bucharest
 51. NIS, (2013), *Repere economice și sociale Statistică teritorială 2013*, Bucharest
 52. NIS, (2013), *Conturi Naționale*, Buletin statistic lunar 12, p. 135-155, Bucharest
 53. NIS, (2014), *Conturi naționale 2010-2011*, Bucharest
 54. OECD, (2000), *System of National Accounts, 1993 – Glossary*, OECD Publishing, downloaded from: <http://dx.doi.org/10.1787/9789264180871-en>, at 14.01.2014
 55. OECD, (2002), *Handbook of National Accounting, Use of Macro Accounts in Policy Analysis, United Nations Publications*, F (81), Numéro de vente: (F.02.XVII.5), New York, downloaded from: http://unstats.un.org/unsd/publication/SeriesF/seriesF_81f.pdf, at 14/03/2014
 56. OECD, (2004), *Manuel de comptabilité nationale, Comptabilité nationale: introduction pratique*, F (85), *United Nations Publications*, New York, Numéro de vente: F.04.XVII.4, downloaded from: http://unstats.un.org/unsd/publication/SeriesF/seriesF_85f.pdf, at 02/03/2014

57. OECD, (2009), *Aggregate national accounts: Disposable income and net lending/borrowing*, OECD *National Accounts Statistics* (database), downloaded from: <http://dx.doi.org/10.1787/data-00002-en>, at 14/03/2014
58. OECD, (2010a), *Handbook on Deriving Capital Measures of Intellectual Property Products*, OECD, Paris
59. OECD, (2010b), *National Accounts of OECD Countries: Financial Accounts-Flows*, 3rd Edition, 1997-2008
60. UN, OECD, IMF, Eurostat (eds.), (1993), *System of National Accounts 1993*, United Nations, Geneva, downloaded from: <http://unstats.un.org/unsd/sna1993>, at 10/09/2012
61. ***, (1997), *Carta Verde. Politica de dezvoltare regională în România*, Guvernul României și Comisia Europeană, Bucharest
62. ***, (2000), *Audit financiar 2000, Standarde, Codul privind conduita etică și profesională*, Economic Publisher, Bucharest
63. ***, (2004), downloaded from: <http://www.mfinante.ro/discuții.mfinante.ro/documente/%5Cpnd2004%5Cpnd2004-006ro%5CI.1.Situația%20socio-economică.doc:3>
64. ***, (2006), *Codul Fiscal coroborat cu modificările aduse de Legea nr. 343 din 2006 pentru modificarea Legii 571 din 2003 privind Codul Fiscal*, Official Gazette no 765 from 07.09.2006, C.H. Beck Publisher, Bucharest
65. ***, (2008), *Standardele Internaționale de Raportare Financiară 2008*, CECCAR Publisher, Bucharest
66. ***, (2014), downloaded from: http://static.anaf.ro/static/10/Anaf/Legislatie_R/Cod_fiscal_norme_2014.htm
67. ***, downloaded from: http://epp.eurostat.ec.europa.eu/portal/page/portal/esa_2010/manuals_guidelines

REGULATIONS

1. ***, (1998), *Legea 151 privind dezvoltarea regională în România*, published in Official Gazette no 265 from 16 July 1998
2. ***, (2004), *Legea 315 privind dezvoltarea regională în România*, published in Official Gazette no 577 from 29 June 2004
3. ***, (2003), *Legea 571/2003 privind Codul Fiscal*, published in Official Gazette no 927 from 23 decembre 2003
4. NIS, (2007), *Ordin nr. 337 din 20 aprilie 2007 privind actualizarea Clasificării activităților din economia națională - CAEN*, published in Official Gazette no 293, Part I, from 3 may 2007
5. NIS, (2009), *Ordin nr. 193 din 31 martie 2009 privind stabilirea Metodologiei de elaborare a conturilor naționale nefinanciare în România*, published in Official Gazette no 292 from 5 may 2009