



UNIVERSITY OF THESSALY

FACULTY OF ENGINEERING

DEPARTMENT OF PLANNING AND REGIONAL DEVELOPMENT

“EUROPEAN REGIONAL DEVELOPMENT STUDIES” POSTGRADUATE PROGRAM



Diploma thesis:

“Business and New Investments in Thessaly.

The decade of 2002- 2012”

Apostolos Vlachakis

Supervisor: Serafeim Polyzos
Associate Professor

Volos, June 2013

ABSTRACT

Under a general approach, the development of the local entrepreneurship, the activation of the available resources and the improvement of the used technology in combination with the design of the appropriate development process present particular interest, because they have impact on the development of a region. The development and the growth of the local economy contribute to the boost of the regional employment and consequently the population is restrained and the internal migration flows to the large urban centers are reduced. In this way, the encouragement of the local initiatives is achieved leading, thereby, to the development of activities that are characterized by high productivity. To this direction, the benefits reaped by businesses, which invest in innovation, will be demonstrated. These benefits are not only economic, because they must not constitute the unique challenge in such cases.

Within the above framework, the present dissertation aims, in the first place, at analyzing the relationship between the adoption and the implementation of innovative and novel business plans and the development or sustainability of businesses. Afterwards, the present will highlight and record all businesses that are actively involved in Thessaly during the last decade and specifically the time period from 2002 to 2012. Moreover, it will examine which businesses were financed by various development programs over the specific timespan in order to realize their business plans and mainly the ones that concern innovation and adoption of new business ideas.

Furthermore, the “attitude” of businesses will be investigated as far as the adoption and implementation of innovative programs are concerned, while, later, the relationship of innovation with Thessalian businesses will be studied. More concretely, the research will focus on the tendency as well as on the general behavior of businesses, particularly the small and medium-sized and the newly established ones, which make an effort to develop or apply innovative ideas. The factors that play an important role in the decision making process for the adoption of innovative ideas and the problems created by their use for the newly established small and medium-sized businesses, which aspire to the development of these ideas, will be explored. Also, to some extent, other - more essential – factors will be proposed, so as the procedure of assessment will be more objective.

After the above analysis, the results of the adoption of innovation by Thessalian businesses with regard to their sustainability and the local development will be evaluated. In the end, the final conclusions arising from the foregoing research will be drawn.

Key words: Innovation, ideas, company, methods, evaluation, development, competitiveness

Acknowledgements

First of all, I would like to express my immense gratitude and love to my family, my wife Maria and my little daughter Athena. I thank them for their patience and understanding, and for the time they missed me in order to complete my postgraduate studies.

Also, I would like to thank my father John who recently died and who believed in me, supported me and strengthened me to go as high as I could get. Thanks to my father and his invaluable help I managed to reach the acquisition of a further degree.

Finally, I would like to thank my supervisor Mr. Serafeim Polyzos, who gave me great help in this effort, with his knowledge and his time.

TABLE OF CONTENTS

Abstract.....	i
Acknowledgements.....	ii
Table of Contents.....	iii
Abbreviations.....	iv
CHAPTER 1: <i>Introduction</i>	1
1.1 Object of the Dissertation.....	1
1.2 Οργάνωση της διπλωματικής.....	3
CHAPTER 2: Business activity and innovation.....	4
2.1 Introduction.....	4
2.2 Definition of innovation.....	4
2.3 Business innovation.....	7
2.4 New technology and innovation.....	11
2.5 Epilogue.....	15
CHAPTER 3: The Greek reality as for the adoption and implementation of innovate actions.....	16
3.1 Introduction.....	16
3.2 Relationship between the adoption and application of innovative and novel business ideas and the development or sustainability of businesses.....	18
3.3 Definition of small and medium –sized businesses.....	20
3.3.1 Introduction.....	20
3.3.2 Definition of small and medium-sized businesses.....	21
3.4 Epilogue.....	23
CHAPTER 4: Business activity in the Region of Thessaly.....	24
4.1 Introduction-Basic characteristics of the Region of Thessaly.....	24
4.2 Spatial structure of Thessaly.....	26
4.3 Opportunities created by the external environment.....	28
4.3.1 National axis of Athens-Thessaloniki.....	28
4.3.2 The port of Volos.....	29

4.3.3	Natural gas pipeline.....	29
4.4	Strategic analysis of the internal environment of Thessaly.....	30
4.5	Possibilities and perspectives.....	30
4.5.1	Advantages of the Region of Thessaly.....	31
4.5.2	Disadvantages of the Region of Thessaly.....	31
4.5.3	S.W.O.T analysis for the Region of Thessaly.....	32
4.5.4	Conclusions.....	33
4.6	The Thessalian business in the decade 2002-2012.....	35
4.6.1	General overview.....	35
4.6.2	Business activity.....	36
4.7	Existing status of Thessalian business.....	38
4.8	Conclusions.....	39
CHAPTER 5: Subsidies of Thessalian businesses and their innovative activity.....		41
5.1	Introduction.....	41
5.2	Financing of Thessalian businesses.....	42
5.2.1	SECTOR 1.....	44
5.2.2	SECTOR 2.....	44
5.2.3	SECTOR 3.....	45
5.2.4	SECTOR 4.....	46
5.2.5	Conclusions.....	46
5.3	Other Forms of Financing.....	47
5.4	Other subsidized innovative businesses.....	48
5.5	Problems of Innovation.....	48
CHAPTER 6: The concept of competitiveness.....		52
6.1	Introduction.....	52
6.2	The concept of competitiveness in regions.....	52
6.3	The relationship of innovation with the Thessalian businesses.....	53

6.3.1 Obstacles to the action of Thessalian businesses.....	55
6.4 Conclusions.....	55
CHAPTER 7: Innovation, entrepreneurship and crisis.....	56
CHAPTER 8: Conclusions-Suggestions.....	58
8.1 Introduction.....	58
8.2 Conclusions.....	58
8.3 Epilogue.....	60
References.....	61

ABBREVIATIONS

TPPI: Technological Product and Process Innovation

SMEs: Small Medium-sized Enterprises

IT: Innovation Technologies

RTD: Research Technological Development

ELSTAT: Hellenic Statistical Authority

PATHE: Patras-Athens- Thessaloniki-Evzonoi

RIPT: Regional Innovation Pole of Thessaly

I.A.N.G.: Industrial Association of Northern Greece

CHAPTER 1

1. Introduction

The scope of the dissertation concerns the development of new businesses during the period 2002-2012 in the region of Thessaly and especially which of these businesses were financed by diverse European or not development programs and finally which of these financed businesses use various innovative activities during the production of their products and services. In the last three decades, the fact that innovation is considered the most important factor to the development of each business at a national and regional level has been adopted by all competent bodies, and for this reason it tends to be a main priority for all the European and national policies. Therefore, on the basis of innovation new ideas are found, which have these characteristics that will render them successful and competitive. It is obvious that the procedure of choosing new ideas for a business is of vital importance.

Economy, today, is led, to a great degree, by innovation. The factors, such as the access to natural resources, the large markets and the specialized employees are equally important, compared to innovation, which is the locomotive of the economic and social development (Andretsch D. B., 1998). The importance of innovation has been recognized pretty early and particularly since 1987. Robert Solow formed a modern macro-economic theory for the development that says that the technological progress and innovation are the greatest locomotives of the economic growth (Weicker, 2006). The characteristics of the new economy need intense innovation. First of all, technology changes fast, and an increasing number of new products is observed that comes from already existing or new competitors. In this rapidly changing environment, the life cycle of products is shorter and consequently they are replaced much more quickly. Moreover, new products and services are more difficult to differentiate by reason of the diffusion of information and strong competition. On the other hand, the needs of the client are more advanced and demanding. They expect more quality and better prices. Furthermore, new markets ceaselessly emerge. There is a constant need for speedier provision of new and better products and services due to the fact that markets change rapidly, technology evolves continuously and good ideas are copied fast (Stark, 2000).

The process of idea management includes the production, collection, elaboration and assessment of the new idea (Turrell and Lindow, 2003). The ideas can derive from the internal area of the company (from employees, directors etc.) or outside the company (clients, wider public). The chosen ideas are those that provide the company with “value added”. Value added means more profits and broader acceptance of products by clients. The stage of assessment is a difficult part of innovation handling, given the fact that an appropriate selection from a large list of ideas has to be done (Riederer et al., 2005). Although the stage of evaluation is of pivotal importance to many businesses, it is an intuitive process (Vahs & Burmester, 2005).

To sum up the above, we ascertain that the nature of innovation by itself creates a significant uncertainty about the procedure of assessment. The number of factors, related to the success of an idea that introduces innovation, is rather big. The success of a new idea is influenced by competition, technology, clients, economy, lifestyle of clients and by other environmental factors, which the businesses cannot evaluate exactly in order to draw a conclusion regarding how they are going to affect the development of this new idea (Ozer, 2005).

1.1 Object of the Dissertation

Thus, according to the above, in the present dissertation, an examination of all businesses that are actively involved in Thessaly, during the last decade and specifically the time period 2002-2012, will be ventured. Also, the relationship of innovation with the development in the region of Thessaly, its extent, as long as it exists, and finally if this meets the modern requirements of markets, will be analyzed.

As far as the methodology that will be followed in the present dissertation is concerned, firstly, an effort to study the existing bibliography, to the possible and feasible degree, will be made, so as the researcher to be equipped with knowledge, to understand the topic and consequently to be able to draw the final conclusions. Later, the collection of necessary data for the implementation of the research which concern the activity of businesses that are active in the Region of Thessaly will follow, while, in the end, an analysis of all results and effects of private investments in Thessaly during the last ten years will be attempted. This analysis will include a complete presentation of the methodological framework and tools of assessment of actions and projects of

private investments that are relevant to their temporal and geographical distribution in the region of Thessaly.

1.2 Organization of the diploma thesis

The diploma thesis consists of four sections. The first section contains the theoretical analysis based on literature review and an attempt is made to define the meaning of innovation and innovativeness that contribute to the development of local entrepreneurship.

The second section is the evaluation of the collected data, and will then attempt to determine the identity of the region of Thessaly through the geographical and geophysical determination of, employment, population and infrastructure. Also, it will occur for each county in the region the situation on investments suffered the last decade, providing concrete examples of each county.

In the third section takes place the empirical analysis of all collected data and investigated which of the subsidized enterprises of Thessaly adopt innovation programs.

The fourth and final section will formulate the findings and proposals that could further improve the current situation, analyzing previously the action plans with axes, the measures and policies proposed, leading to further development of subsidized Thessalian innovative businesses.

CHAPTER 2

Business Activity and Innovation

2.1 Introduction

Nowadays, the changing and constantly developing economic system renders the reflection of development necessary through those mechanisms that define its dynamics. This development is reflected in the characteristics of all business actions, which concern the renewal of the group of businesses, the form of businesses and finally the sectors in which they are actively involved. Entrepreneurship is, to a great extent, a common feature of all local economies, because many times it tends to exceed the narrow limits of individual businesses and to characterize the business mentality and the economic culture of the country.

The business activity includes a wide range of actions, branches and sectors, while, at the same time, it is characterized by strong dynamics with tendencies for ceaseless changes. These alterations are mainly due to technological changes, economy and expectations of the society. Therefore, the competition that rules every kind of business activity can be maintained only via the adaptiveness of these businesses to the new competitive environment that is created every time by adopting innovations and taking advantage of new technologies that are available on the market.

2.2 Definition of Innovation

The term “innovation” derives from the Latin word “novus” that means new, which evolved into “in+novare” that has the meaning “to do something new”. Innovation is a wide concept that can be understandable by everyone in many ways, since its results are obvious in our daily routine. It is simultaneously so simple as well as hard to comprehend. In bibliography, there are a lot of definitions of innovation, which determine it not only as procedure but also as a consequence of this. The theory of innovation was firstly developed for industry and later it was applied to services. In the case of services, the heterogeneity of every branch must be taken into consideration, a

fact that indicates the separate study of every sector (Orfila-Sintes, F. & Mattsson, 2007). For that reason, innovation can include new products and services, new methods when it comes to the production, disposal and distribution and changes in management and organization of work.

In order to understand better what was mentioned in previous paragraphs, we have to examine more analytically what is defined as innovation. The use of the term innovation indicates the new and novel idea for the implementation of a thing or the new process of the aforesaid implementation as well as the application of new inventions or discoveries in order to attain a certain result. In other words, we can say that innovation constitutes new knowledge created through research, discovery, development and release of new improved products, production processes as well as of new organizational structures. The technical progress is mainly used for the production and exploitation of new products, services and processes that the market desires. The term is frequently used within the economic/business/commercial framework. According to the definition of innovation, proposed by the OECD in the “Frascati Manual”, it is about the transformation of an idea into a marketable product or service. In this manner, the term refers to the process. Generally, it could be defined as the actions that are contained in the process that consists of the generation of the idea, the development of technology, the construction and the promotion of a new or improved product or of a construction process (Trott, 2005).

On the other side, when using the word “innovation”, we indicate a new or improved product, equipment or service that is available on the market and then the emphasis is put on the outcome of the procedure. Innovation is connected with research and development, especially in the area of businesses, where large amounts are spent for this purpose, through the respective departments (Research and Development). Innovation is based on different combinations of the existing knowledge and therefore, according to J. L. Christensen “Innovation, although cannot be ascribed to random factors, since it relies on the existing knowledge and usually on the direction that competition creates in the market, is cumulative and changes but at the same time alters the environment around it” (J. L. Christensen, 1992).

In the European Union, innovation is an accomplishable goal through the European programs of collaboration among transnational partners. Innovation inside the

EU is measured by the Innovation Scorecard, which started functioning in 2006. Innovation is measured with the use of indicators (Wikipedia, 2013), which are classified into the following categories:

- Relation to experience
- Learning
- Development

Innovation in the modern economic reality constitutes, to some extent, continuance of invention. Invention is called the creation of new knowledge that is often combined with the discovery of a new product. Moreover, the concept of commercial exploitation is contained in the concept of innovation. In conclusion, after having taken into account the above, we could define innovation with the use of the algebraic relationship, as described in figure 2.1.1:

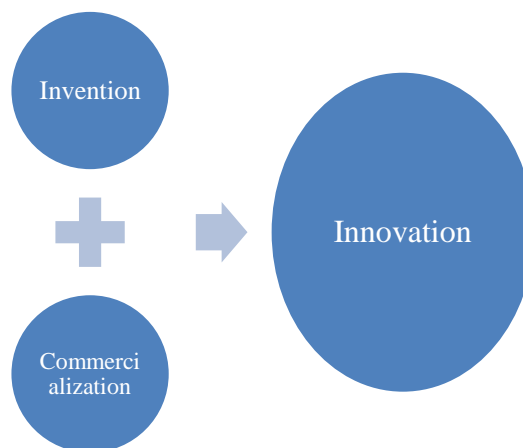


Figure 2.1.1: Obtained relationship of innovation

Thus, we ascertain that innovation aims at the increase of productivity and sales or at the decrease of production cost of businesses. It is evident by its definition that innovation has a great range and many components: scientific, technological, economic, environmental, organizational, commercial and political. It concerns the production process as well as the final result in the form of a product, process or service. Innovation presupposes communication channels or networks among all participants, from the producer or merchant to final consumer.

The most important types of innovation according to Turbin Patrick (Turbin Patrick, 2002) are the following:

Marginal innovation: Is called the constant process that consists of improvements in existing products and services or of reviews in practices, planning and processes of function and control and in strategies.

Radical innovation: It is related to increased risks. It often leads to hiatus. Its main trait is the usage of an important point of the product lifecycle or of a business that creates new conditions for the market.

Strategic innovation: It creates new important changes in strategies, which modify the rules of competition that are valid for each branch.

Valuable innovation: It pays attention to the needs of clients and plans solutions for their satisfaction.

2.3 Business innovation

Business innovation is based on a creative idea that has to be useful. For this reason, it must be feasible and able to cover the needs of the market. The size of businesses that innovate varies. Even though large businesses have more human and economic possibilities (some businesses invest more than 10% and many times reach 25% of their turnover in research and development), it has been proved via conducted surveys that even small businesses can innovate to an important degree (Tidd J, Bessant J. & Pavitt K. , 2001). Innovation is a business activity that combines something old, tested and successful with something that will be tested for the first time and many risks are implicated as for the result. Every business plan is developed in three levels:

- The first level concerns the **value proposition** (from the product to the client).
- The second level has to do with the **supply chain**.
- The third level is related to the **target client**.

As far as the characteristics of a business that innovates are concerned, these are summarized as follows:

- Ideology and concentration on an idea (mainly by the supreme administration).
- Realization of the current know-how and of the possible additional one that is required as well as of the way in which this can be obtained.
- Encouragement of the intra-company diffusion of the information, promotion of the staff mobility as well as flexible organizational structure.
- Administrative tolerance regarding errors and ability to handle changes.
- Open-mindedness for collaborations with other bodies.
- Focus on the needs of the consumer.
- Sensitization when it comes to the environmental, moral and social issues.

One very important element of innovation in businesses is management. It is based on the knowledge and analysis of the needs and abilities of the client. It is about a method with the use of which the entrepreneur creates new resources and enriches the existing ones for the value creation towards the client. The suitable context for profitable management (Geordata Z. 2003) is governed by the following characteristics:

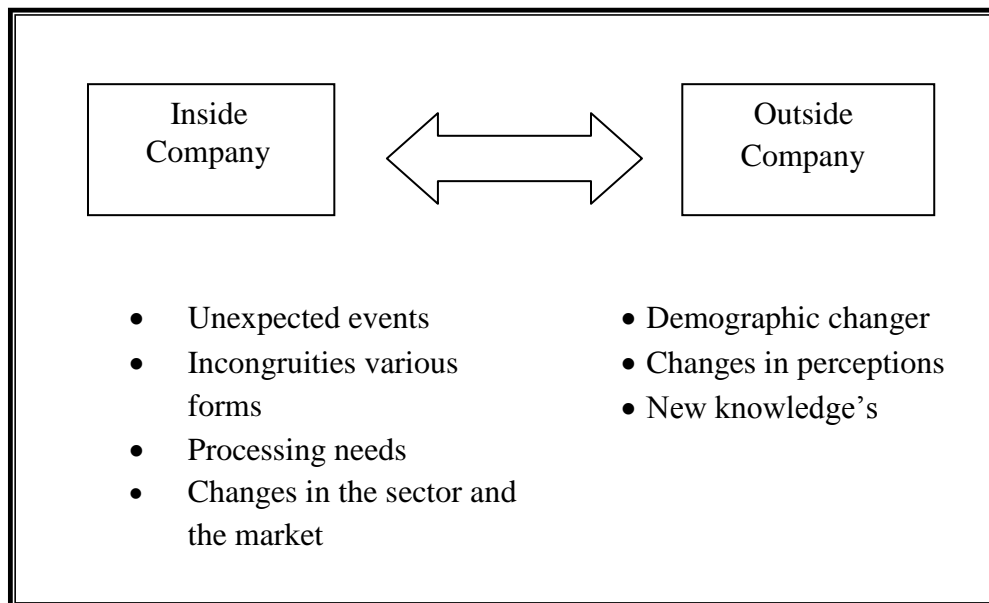
- Clear strategy.
- Organizational framework that supports the whole effort.
- Efficient and simple structures of implementation.
- Functional and effective relationships with the external environment.

The prerequisites for the successful introduction of innovation according to the Federation of Industries of Northern Greece are cited below:

- Fruitful organization of the business
- Innovation is considered one of the basic business activities
- Manipulation with regard to implementation
- Boost and reward of the human factor inside business
- Tested model of action

There are various sources of innovation inside and outside business. Inside business, there are 4 sources of opportunities, while outside business there are 3 ones. The diverse sources of opportunities are depicted in figure 2.3.1 that follows.

Figure 2.3.1: The diverse sources of opportunities



The responsibility for innovation lies either with the department of research and development or with the Supreme Administration. Nevertheless, the most widespread point of view is that it is appropriate for every person, who has an idea, to introduce it to the company following the arrangements of experts. Innovation can be applied by the leader, entrepreneur, sponsor or by the project manager.

A specific methodology is required to be followed so as the introduction of innovation will be successful and bring profits for the business. The model is mentioned in the international bibliography as strategic innovation process model that borrows elements from the strategic management process. This diagram functions as a guideline on how a business can exploit the advantages of innovation, while being oriented to the market. In the following figure 2.3.2 the diagram of innovation process is presented.

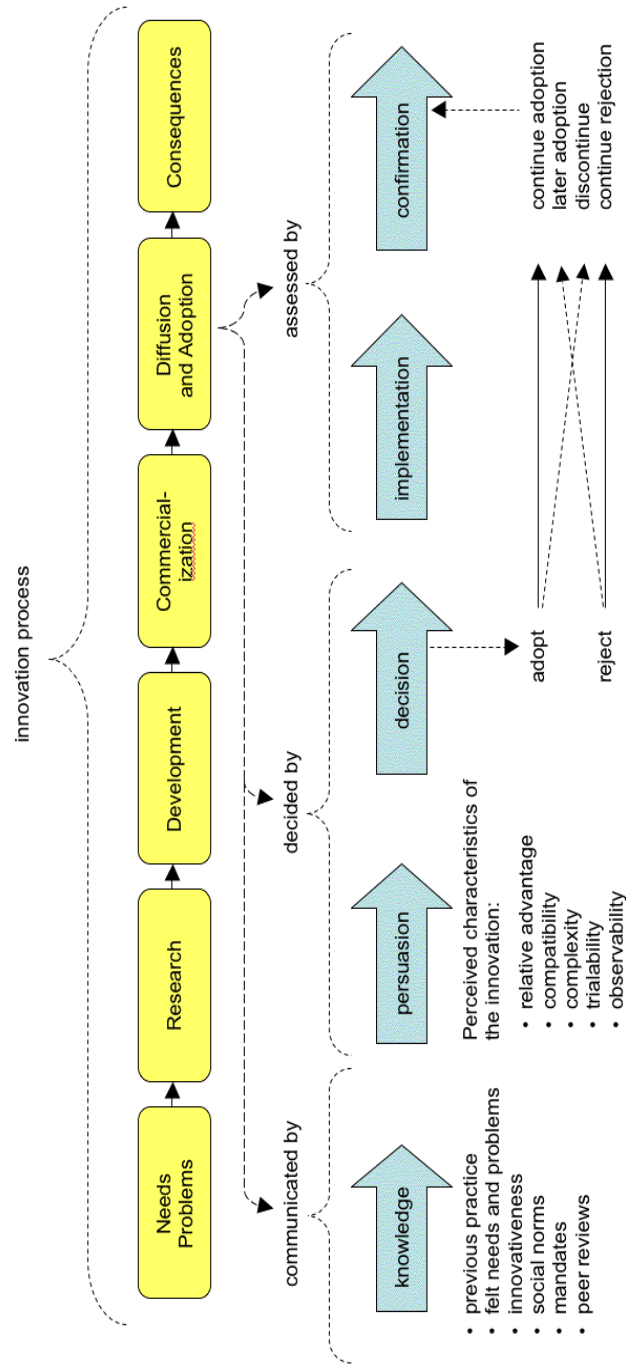


Figure 2.3.2.: The innovation process model

As far as the stages on the basis of which the introduction of innovation takes place are concerned, Allan Afuah (Afuah, 2003) suggests the following:

- Conception of the idea.
- Recording of the idea and for what it can be useful.
- Economic assessment and feasibility of the proposal.
- Putting the idea into practice.
- Evaluation of results.

Next, the processes for the introduction of innovation follow the above stages for the introduction of innovation and these are the following:

- Novel opportunities and threats.
- Recognition of possibilities.
- Tough decisions based on profit.
- Wider company strategy.
- Strategy of innovation.
- Functional strategies.
- Structure of the business.
- Procedures and incentives.
- Human resources.
- Profits, copyright and protection.

2.4 New Technology and Innovation

The reasons for which new technologies and innovations are introduced to the policy of businesses as summarized as follows:

- Replacement of old-fashioned products.
- Expansion of all produced products inside or outside the basic production framework.
- Development of more environmentally friendly products.
- Maintenance of the business market share.

- Increase of the business market share.
- Opening of new markets abroad or new target groups inside the country.
- Amelioration of the production flexibility and lower production cost with parallel decrease in the work cost, the consumption of raw material and energy, the rejection rate, the cost of product design and in the total production time.
- Improvement of the product quality.
- Improvement of working conditions.
- Reduction of environmental damages.

New technology is developed in two fields: a) the first field concerns the innovative ideas and inventions and b) the second field is related to their scope with parallel implementation of innovative activities. The second field evolves in two phases: the first one refers to the primary application of innovation and the second one has to do with the diffusion of this application to other points of the area. Innovation, when it comes to its spatial dimension, can be classified into the innovation of the product and production process. The first one is defined as the introduction of a new product to the market or as the improvement of a product already released to the market. The second one appears in three forms for the existing products. These are:

- The innovation that reduces the production inflows (e.g. decrease of working hours for the production of a specific product).
- The innovation that improves the working conditions (e.g. security of facilities and employees).
- The innovation that aims at the elimination of technical difficulties in production or service provision with the use of improved processes (Konsolas, 1997).

Another dimension that innovation can obtain, according to Eurostat, is that of generating innovation, i.e. “the complex system of factors that form innovation at a business level”. Its placement means the recognition of the role of the business in an innovative economy. This tendency depends undoubtedly on the opportunities presented in the area of technology. Businesses differ as to their ability to recognize and exploit technological opportunities. Therefore, in order for a business to innovate, it has to form a picture for what these opportunities are about, define a related strategy and to have the possibility to transform these stimuli into real innovation and all the above should take

place in less time compared to its competitors. The ability to innovate consists on the one hand of one total of factors offered or not by the business and on the other hand of effective ways of combination of these factors. Its technological capability is partly integrated into its workforce. The specialized staff, without which new technologies cannot be checked, constitutes an important advantage. Beyond researchers, the business needs engineers able to manage constructive processes, vendors capable of understanding technology (in order to achieve sales as well as to convey the suggestions of clients) and general managers aware of technological issues. The ability to innovate depends on the manner of the organization of the workforce and facilities (exploitation of skills, division into departments), the economic structure, the market strategy, the competitors, the collaborations with other businesses or universities and mainly on the internal organization. Of course, many of the above are characterized by interdependence, e.g. a certain type of exploitation of its skills conforms with a specific-type strategy with particular economic structure and so on. The choices of the business with regard to the changes of its technological advantages, possibilities and productive abilities are the following: a) strategic choices b) choices with regard to RTD and c) choices independent of RTD⁶⁷ (Eurostat, 2000).

From the analysis about innovation, so far, two distinct categorizations arise:

- *Innovation in business.*
- *Innovation in product-process.*

Innovation in business: A business of Technological Product and Process Innovation (TPPI) is the one that has implemented technologically new or significantly improved products or processes or combinations of products-processes within a period of study with successful TPP innovation activities. A business with revoked TPPI activities or continuing innovation activities, without having been implemented within the study period, is not included in this categorization. Conventionally, the concept of a business with TPPI contains all already existing businesses at the beginning of the study period, during which they created technologically new or significantly improved products or processes, those businesses that were established during this period and since their foundation they implemented technologically new (or improved) products or processes

for the market of their exploitation and businesses, which upon their establishment and before the end of the study period implemented technologically new (or improved) products or processes for themselves (Eurostat 2000:79).

Innovation of products and processes: This dimension includes several subtotals that determine diverse choices, which are based on different extensive approaches; for example, researches related to information technologies (IT) or those that consist of immaterial investments, such as RTD, software, staff training, marketing etc. There is surely the purely organizational innovation that is pretty widespread and can bring important ameliorations in the performance of the business. When it comes to the product-process, the word “technologically” or new or improved is not always clear particularly while using superlative forms. For instance, in the field of services, it was considered that “technological” must be interpreted as someone, who uses equipment and high technology installations.

More analytically, technological product innovation is called the implementation of the commercialization of a product with improved features of performance e.g. provision of objectively new or improved services to the consumer. Technological process innovation is the implementation–adoption of a new or significantly improved production or delivery methods that can include changes in equipment, human resources, working methods or a combination of them. In practice, the possibility to apply an innovation depends on what extent the above characteristics and their degree of novelty have an impact on the sales of the examined business or branch, because the conception and application of an innovation as well as the exchange of goods and services among businesses (mainly of high technology) are easier rather than these that are addressed to the public. Given the fact that there are not common criteria among consumers, the use of the term “technological product innovation” excludes changes that lead to the improved but to the subjective satisfaction of the client deriving from individual and aesthetic criteria, the effect of fashion or marketing etc. (Eurostat 2000:23-25).

2.5 Epilogue

In conclusion, so far, the technological product and process innovation (TPP innovation) includes technologically new or significantly improved products or processes. A technological product and process innovation is considered implemented, if its introduction to the market has been realized (as far as the product innovation is concerned) or if it is used in the framework of the production process (as far as the process innovation is concerned). The technological product and process innovation contains a series of technological, organizational, economic and commercial activities. An application of innovation to the field of services and more concretely to the post and telecommunications companies is related to the adoption of digital transmission systems and the simplification of the telecommunications network with the use of less and more automated call centers that reduces the number of levels of the network. On the other side, with regard to the banking sector, the adoption of plastic and “smart” cards of multiple uses, the customer service with computer terminals, the telephone service, the usage of visual character recognition systems, the digitization of documents with scanners and their import into computers, are achieved.

CHAPTER 3

The Greek Reality as for the Adoption and Implementation of Innovative Actions

3.1 Introduction

Greece, when it comes to the issue of the adoption and implementation of innovative business ideas, presents a lag that is due to the below reasons:

- The lack of culture that should encourage the initiative and search of innovative ideas.
- The shortage of major investments
- The maturity of investment plans
- The unwillingness of the financial instruments to fund the newly established and small and medium-sized businesses, notably nowadays where the financial credit system is undergoing a crisis.

The moment when Greece experiences the most difficult economic conjuncture of its recent history and at the same time the shrinkage of its production fabric is observed, we watch in some countries, either developing or developed, that a new technological standard evolves: Services, Software and Devices converge and through the exploitation of the internet possibilities, breakthroughs take place. These possibilities that some years ago seemed to be inaccessible, today they form part of our daily routine. This is only the beginning. The question that arises and the answer of which is not easy, for the time being, is the following: Which could be the attitude of Greece towards the new reality, as formed by technological developments. Despite the fact that there is an important technological gap between Greece and Europe, there is also a visible tendency to adopt new technologies. The hesitation and skepticism retreat, as the profits become evident at the level of productivity as well as of cost reduction. The economic crisis functions in a multiplying manner, given the fact that the majority of businesses seek ways of restructuring their operations and optimizing their effectiveness. Nevertheless, on the other side, these positive advancements are overridden by the restrictions in the field of entrepreneurship. The way and means by which entrepreneurship is approached in Greece reflect to a great degree the weaknesses of the

economic model that is tested by the global and local crisis. In the past, the private sector mainly focused on investments of low value added, which due to their size, did not give room for the exploitation of economies of scale, a fact that constitutes a precondition for further economic development and growth. Therefore, the exceptions were not able to overturn the negative trade balance. In parallel, the institutional factors, despite the efforts made, have not yet managed to create a welcoming environment that will encourage the dynamic entrepreneurship of high value added. However, the achievement of the economic growth, especially under crisis conditions, requires substantial changes in the way in which Innovation and Entrepreneurship are approached. This attempt has to be made consistently and constantly in order to maintain the route of progress of the Greek society. Beyond the shadow of a doubt, the great changes that will be noted in the next five to ten years will create important opportunities for those, who will take advantage of the current technologies efficiently and without stagnation, envisaging new ways of value creation for businesses, governments and citizens of a society in general. The smooth and without reluctance route to that, which today seems technologically unfeasible, can really open the way for exceptional opportunities, beyond our narrow borders, by replacing Greece and Greeks at the forefront of the development.

Nowadays, we know that innovation thrives and is developed in environments that cultivate, promote and give value to the knowledge and research, in environments that are eminent for the total lack of restrictions on thinking and creation and in environments, where the different conception, the new idea and the ability to observe innovative persons are the purpose. Therefore, the basic factor for the development of innovation contains a great variety of bodies, processes, policies and extra geographical-economic-technological and social relationships that mainly aim at the reinforcement and growth of businesses, which constitute the core of the process upon which innovation is developed. This means that businesses do not innovate by themselves but they interact ceaselessly with the individual parts of the system, which, along with the interactions developed among each other, specify the adoption and application of innovative actions (Komminos et al., 2001).

3.2 Relationship Between the Adoption and Application of Innovative and Novel Business Ideas and the Development or Sustainability of Businesses

One of the most important characteristics of the modern economic and business reality is fluidity. This fluidity is produced due to changes that occur simultaneously; on the one hand technology alters increasingly and on the other hand the requirements and needs of users change rapidly. The economic factors do not sit back, because if the creator of an innovation remains inactive, then he will lose very soon any advantage arising from the discovery of this innovation (Denton, 1999). Thus, businesses are called to decide on the onset of new innovative activities and the introduction of new innovations. An innovation is introduced to a business, according to Zmud, as mentioned by Sharma & Rai (2002), page 392, when:

- The business acknowledges the need for change that is usually triggered by a problem or a need (need-pull).
- When external or internal forces promote a new technology or a new idea that promises to upgrade the function of the business (technology-push).

Therefore, the introduction of innovation is either pulled by the needs of the business or is pushed by technology or both. Thus, modern businesses have to constantly evolve and activate as to innovation, otherwise they will always face the risk of collapse. For this reason, businesses should undertake innovative actions, produce at cheaper prices, in better quality, in smaller quantities and greater variety in order to meet the specialized needs of every part of the market. Furthermore, the reduction of cost and consequently of the price of the produced product through innovative processes will either render the production at the lowest possible cost or lead to the production of a significantly differentiated or totally new product.

The adoption, diffusion and application of innovation by businesses have obtained an increased interest in the field of management, given the importance to the survival and development of businesses. Today, the survival and development of businesses depends on how competitive businesses are and on how competitive they could be in an era, where the economic crisis creates a suffocating environment for them. Moreover,

the great development of the information and communications technologies during the last years accelerated and expanded to a great degree the diffusion of information all over the world. Thus, in the modern environment, where the globalized economy, the strong competition and the current economic crisis prevail, the necessity for the strengthening of competitiveness of businesses via innovation is becoming even more imperative. For the afore-mentioned reasons, many Greek businesses give great importance to the process of diffusion of innovation, which has a significant impact on their productivity.

The innovative businesses focus on the usability of the product and they make an effort to define, through research, where and how the new product will change the life of people. In addition, the application of innovative and novel business ideas operates as an “injection against economic crisis” and as an “elixir that provokes development” and helps to the sustainability of businesses. For this reason, many businesses spend large amounts on R&D. These expenditures are positively related to the probability of introduction of a new product.

The introduction of innovation is adopted by the management of the business and later the stage of the application follows. Therefore, the people in charge of the management of the business have to be revolutionary with a developed ability to observe in order to monitor carefully and detect what the market needs every time. Generally speaking, the diffusion of innovation into a business is a complex procedure that takes place gradually. During this phase, the innovation process contributes to the transformation of the characteristics and abilities of a business by influencing its general competitive capabilities and improving the ability to understand the dangers and opportunities that appear as well as the reaction to various situations that arise (e.g. competition, economic crisis etc.).

Another feature of innovation has to do with its spatial character, because, beyond the other factors that have an effect on its formation, innovation constitutes interdependence of the origin country, the business action and the wider geographical region to which it belongs. This is due to the fact that businesses always adopt innovations through cultural and systemic local relationships.

In conclusion, the transmission of technology and know-how is undoubtedly an important element and tool to the development of the prosperity of businesses. A

particular problem is noted in businesses, which lag behind in the sectors of research, development and innovation. These businesses usually fail for being unable to gain the market share that corresponds to them. Nevertheless, as it was ascertained, technology can be transferred from businesses, universities and other research laboratories to other businesses that are more technologically advanced. However, this fact can create other problems such as the blockage and asymmetrical information while transmitting technology. The remarkable conclusion is that technology transfer leads to innovation, which, in turn, ends up in the desired development and welfare as a whole.

3.3 Definition of Small and Medium-sized Businesses

3.3.1 Introduction

The small and medium-sized businesses play a fundamental role in the European economy and by extension in Greece, because they constitute the backbone of the business activity. The small and medium-sized businesses seem to possess more than 95% of all businesses and to employ the majority of the workforce. Moreover, the international researches have demonstrated the contribution of small and medium-sized businesses as a basic factor for the increase of the employment, the amelioration of the production and the promotion of the business innovation. The major advantages of a smooth function of the institution of small and medium-sized businesses are the following:

- They promote the social stability.
- They ensure high rates of sustainable development.
- They maintain the vital relationship between the productive reality and its territorial dimension.
- They maybe constitute the most efficient way to face unemployment and all problems caused by it, because they create more job opportunities.
- They lead to the reinforcement of the idea of “the society of knowledge”, since they are a place for training.
- They boost the global competitiveness of the EU member states. Nonetheless, the small and medium-sized businesses present specific characteristics, which are the basic obstacle to the development of their institution, such as the absence

of economies of scale, the (usually) high business risk, the lack of guarantees of recourse to borrowing, the frequent complicated bureaucratic mechanisms etc. The EU has realized on the one hand the significant profits from the reinforcement of the institution of small and medium-sized businesses and on the other hand the problems that they face and for this reason the elimination of the obstacles met by small and medium-sized businesses appears in the first place of its activity hierarchy.

3.3.2 Definition of Small and medium- sized businesses

As it was mentioned in the previous paragraph, the small and medium-sized businesses constitute the majority of businesses globally. The definition of micro, small and medium-sized businesses is updated to take account of economic developments. The definition of businesses according to staff headcount and turnover or balance-sheet total is essential for identifying businesses able to benefit from the European Union (EU) programmes or policies, specifically designed for small and medium-sized businesses. The question that arises is how a business is defined as small or medium-sized. The OECD mentions in its report on small and medium-sized businesses and entrepreneurship that there is not an internationally accepted definition about entrepreneurship but it is defined every time in relation to the specific economic and social conditions of every country as well as to the applied policies. An additional factor that is taken into consideration when it comes to the definition of small and medium-sized businesses concerns the size of markets. According to the international bibliography, most used quantitative criteria for the definition of a business as small and medium-sized is as a primary place the headcount and as a secondary place the turnover. In table 3.3.2 below, the way in which small and medium- sized businesses are defined all over the world are indicatively presented.

Table 3.3.2.1.: Criteria about the size of the SMEs in the world

Country	Headcount
USA	<500
JAPAN	<300
GERMANY	<200
FRANCH	<200
ITALY	<200
AUSTRALIA	<50

Source: Wikipedia, 2013

The countries of the OECD make use of a variety of definitions. The ordinary criteria about the definition of small and medium-sized businesses are the headcount and turnover. The limits of every criterion from country to country are the specific difference. A widely widespread definition is the one which is used by the EU and sets the upper limit of employees to be 250. Those criteria are defined from the Recommendation 2003/361/EC. More concretely, according to the European Commission, as for the definition of micro, small and medium businesses, the European Union adopts the following:

- The category of small and medium-sized businesses includes businesses that employ less than 250 persons and which have an annual turnover that does not exceed 50 million € and/or their yearly balance sheet reaches 43 million €.
- Within the category of small and medium-sized businesses, a small business is the one which employs less than 50 persons and its annual turnover and/or yearly balance sheet does not exceed 10 million €.
- Within the category of small and medium-sized businesses, a micro business is called the one which employs less than 10 persons and its annual turnover and/or yearly balance sheet does not exceed 2 million €.

Table 3.3.2.2.: Criteria about the size of the SMEs in Europe

Enterprise category	Headcount	Turnover	or	Balance sheet total
Medium-sized	<250	≤ € 50 mil		≤ € 43 million
Small	<50	≤ € 10 mil		≤ € 10 million
Micro	<10	≤ € 2 mil		≤ € 2 million

Source: Europa official web page

3.4 Epilogue

During the last years, it is becoming increasingly evident that the adoption and application of innovative and novel business ideas, particularly from the part of the small and medium-sized businesses, is a key factor for their constant economic growth and prosperity, while the connection between the development of innovation and the developmental route of the economy emerges, a fact that leads not only to the sustainability of businesses but also to the creation of new career opportunities (Reed & Moreno, 1986) contributing, thereby, to the confrontation of unemployment and at the same time to the regional development of the area.

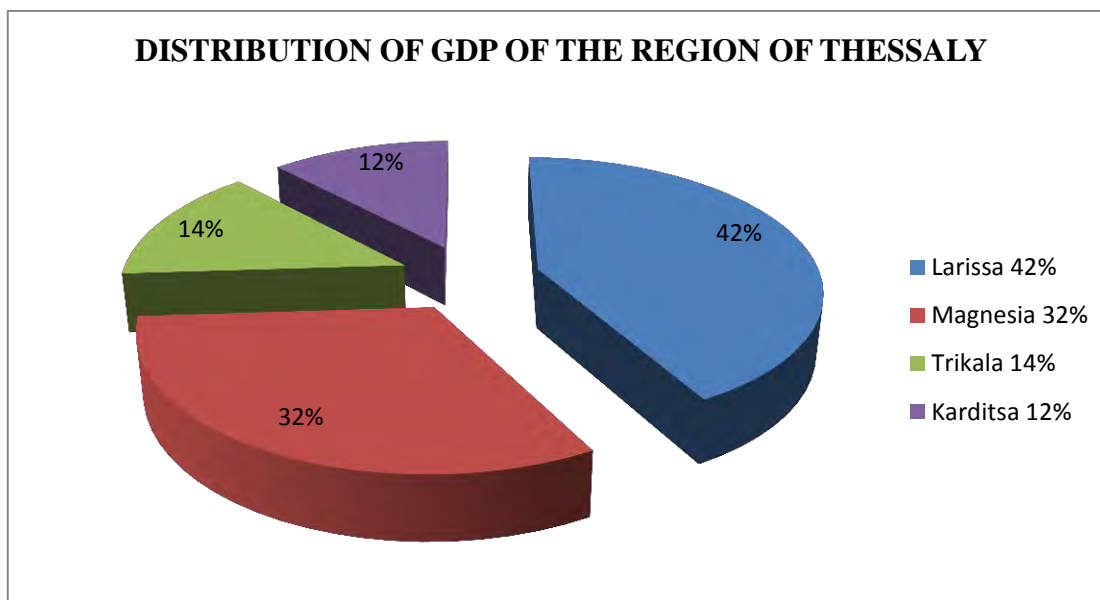
CHAPTER 4

Business Activity in the Region of Thessaly

4.1 Introduction-Basic Characteristics of the Region of Thessaly

Thessaly lies in the central-eastern side of Greece, with 12.037 km² in area that equals to 10,6% of the total territory that reaches 131.910 km² and which is distributed as follows: 36,1 % cultivated areas, 19,5% forest areas, 37,5% grasslands and 6,9% other areas. The 5, 5% of the produced Gross Domestic Product (GDP) of the country corresponds to the region of Thessaly, according to the data of the Hellenic Statistical Authority (EL.STAT), which concern the period 2000-2008. The prefecture of Larissa contributes by 42% to the GDP of the region of Thessaly, while the prefectures of Magnesia, Trikala and Karditsa participate in the GDP having the following percentages respectively: 32%, 14% and 12%. The above data are presented in diagram 4.1.1 that follows:

Diagram 4.1.1.: Distribution of GDP in the Region of Thessaly



Source: EL.STAT

According to the data depicted in table 4.1.2, we observe that the real Gross Regional Product (GRP) per capita of the region is estimated to be 8.190 € in 2001, i.e. lower by 8, 7 % than the GDP per capita. At a regional level, it was lower by 36, 3% than the regional GDP per capita of the Region of Attica (Source: Hellenic Statistical Authority, National Data-temporary data). This shows that Thessaly lags behind in relation to the first region of the country, Attica.

Table 4.1.2.: GRP per capita and GDP (€, stable market price 1995)

Year	Prefecture				Region	Total
	Karditsa	Larissa	Magnesia	Trikala	Thessaly	Greece
1997	6009	7700	7755	5647	7035	8375
1998	6315	7810	8081	6442	7404	8333
1999	6556	8176	8373	6688	7669	8314
2000	6836	8496	8710	6969	7999	8352
2001	7093	8702	8795	7275	8190	8972

Source: Data processing Allmedia, ELSTAT

The regional units of Magnesia and Larissa have higher GRP per capita than the Region, while the regional units of Karditsa and Trikala have a lower one. Larissa and Magnesia had the largest contribution to the GRP of Thessaly. Their average shares during the five-year period from 1997-2001 are estimated to be 39, 5 % and 29, 6 % respectively. More analytically, the data that concern the GRP of Thessaly appear in table 4.1.3 that follows:

Table 4.1.3.: GRP and GDP (€, stable market prices, 1995)

Year	Prefecture				Region	Total
	Karditsa	Larissa	Magnesia	Trikala	Thessaly	Greece
1997	779	2101	1557	786	5223	84773
1998	819	2165	1622	895	5500	87633
1999	848	2243	1680	927	5699	90778
2000	883	2335	1749	965	5930	94485
2001	919	2430	1821	1004	6174	98368

Source: Data processing Allmedia, ELSTAT

The distribution of the gross regional product (GRP) per sector of the economic activity in the prefectures differs a lot from the respective distribution of the whole country. Concretely, the contribution of the primary sector is significantly higher, while the share of services is lower, Industry contributes firmly to the employment and produced product of the Region of Thessaly. Larissa and Magnesia are equipped with active demarcated areas in contrast to Karditsa and Trikala that present dispersion of the location around the urban centers. Industry has higher participation in regional units of Larissa and Magnesia, whereas in Karditsa and Trikala, the industrial activity does not have a clear character and does not present comparative advantages in manufacturing.

4.2 Spatial Structure of Thessaly

The region of Thessaly is administratively divided into four regional units. These are:

- The regional unit of Larissa, the capital of which is Larissa.
- The regional unit of Magnesia and Northern Sporades, the capital of which is Volos.
- The regional unit of Trikala, the capital of which is Trikala.
- The regional unit of Karditsa, the capital of which is Karditsa.

Map 4.2.1.: Administrative division of the Region of Thessaly



Source: Internet, 2013

The basic development and transport axis of the country PATHE (Patras-Athens-Thessaloniki-Evzonoï) passes through the Region of Thessaly, which is depicted in map 4.2.2 that follows. The distance of PATHE from the two large development poles of Athens and Thessaloniki are 350-150 km and 3-1, 5 hours respectively and they allow the departure and return on the same day. Moreover, at a relatively short distance from the northern limit line, Egnatia Odos is found and constitutes the major development axis of East-West, while the creation of the route E56 that is under construction, will connect PATHE with Egnatia Odos and give an outlet for the West Greece. Therefore, Thessaly is found in a strategic and easily accessible geographical position.

Map 4.2.2.: National Road of Athens-Thessaloniki



Source: Internet, 2013

As far as the spatial structure of Thessaly is concerned, the data that characterize the region is the constant uniformity, i.e. the extended lowland part that is surrounded by mountains westwards and by the Aegean Sea eastwards. This spatial integration due to geomorphology facilitates the internal cohesion and the spatial completeness of the region. The networking and Complementarity of the residential area, the existence of powerful centers - poles of development, spatial clustering and structure - constitute

additional positive elements for its current spatial construction. From the exploration of the development data and intra-regional relationships the following arise:

- There is a strong dualism between West and East. The regional units of West, Karditsa and Trikala, depend to an important degree on the eastern regional units of Larissa and Magnesia.
- The regional units of West, Karditsa and Trikala, are characterized by lower growth rate compared to the eastern regional units of Larissa and Magnesia.
- The presence of the urban center of Larissa is a significant development pole with an intra-regional role and features of national and global range.
- From the existing urban centers we ascertain that there is a tendency of polarization in the Region of Thessaly, since the bulk of the population is concentrated in the capitals of the regional units.

4.3 Opportunities Created by the External Environment

There is a dynamic relationship between the external environment and the strategic development of businesses. The advancements in the external environment have a direct impact on businesses, since they can influence in such a way by changing very frequently their competitive fields. For this reason, in order for the business actions to be successful, they have to:

- Adapt to the changes that the external environment dictates.
- Exploit all those means provided by the external environment in order to develop their business plans.

In our case that is under active consideration and concerns the Region of Thessaly, the opportunities created by the external environment are based on three important and national development poles, which are analyzed in the following paragraphs.

4.3.1 National axis of Athens-Thessaloniki

One of the basic national poles for the development of a region is the existing railway network that reflects a variable of the external environment. In this case, the axis in question is that of Athens-Thessaloniki that traverses the prefecture of Larissa and more concretely the city of Larissa, a fact that contributes to the further development of the region. The rebound of significant shares related to the transport project is claimed by

the Hellenic Railways Organization (OSE) as well as the full activation of the general direction of Commercial Exploitation, the provision of new wagons, the transfer of grouped cargos of sugar, the development of collaborations in the field of logistics, the re-emergence of OSE as an important transport sector and the fresh products via the provision of new cooling commercial wagons, are also demanded. The railway will raise its transport work due to another reason. The constant increase in the fuel prices alters gradually the scenery of the long distance transport. Many productive companies such as car agencies, forwarding agents and businesses of Third Party Logistics have started studying alternative scenarios of dispatch of goods for long distance trips by railway. In addition, the railway has lower invoices, compared to other means of transport, is less influenced by the existing weather conditions and the strike of employees, has specific timing and is environmentally friendly.

4.3.2 The port of Volos

A second pole for the development of a region is the existence of a port. In that case, the marine transports in the region of Thessaly are implemented today by the port of Volos. The geographical position of the port of Volos is particularly favorable and of vital importance as to the marine area of the Aegean as well as to the Greek land area. In other words, the port is found about in the middle of the most important development axis of the country, connected with the national road network and the basic national railway network.

4.3.3 Natural gas pipeline

Finally, a third development pole is the access of businesses to cheaper and environmentally friendlier forms of energy such as the natural gas. In this case, the central high pressure pipeline of the network of the Public Gas Corporation (DEPA) traverses the eastern part of the region and covers the respective development zone through medium pressure pipelines to Larissa and Volos. Some important industrial units that belong to the regions of Larissa and Volos have already been connected with the natural gas network. The extension of the network to Karditsa and Trikala that is under implementation in order to cover the western development zone of the region gives a complementary boost to the development process towards the direction of the well-balanced growth of the region.

4.4 Strategic Analysis of the Internal Environment of Thessaly

In a recent interview to the newspaper “To Vima” (10/03/2013) the head of the region of Thessaly Mr. Kostas Agorastos talks about the fight for the recovery of the real economy in Thessaly. Specifically, he mentions that “Thessaly has all the prerequisites to be the pilot for the new productive model of development of the country. Starting from the primary sector, where most people are employed (as a percentage of the active population), then the secondary sector includes the processing of agricultural products and as for the tertiary sector, tourism and agritourism, the aspects of the new model of productive reconstruction unfold”.

The geographical position of crucial importance of the Region of Thessaly gives a comparative advantage towards the other regions of Greece, except for Attica that concentrated the 50% of the total economic activity of the country (EL.STAT). Its production fabric is based on traditional branches of the Greek economy. Therefore, the primary sector, the greatest percentage of which occupies the agricultural sector, constitutes the locomotive of the local economy by offering employment to the secondary sector of processing of agricultural products, while, as far as the tertiary sector is concerned, tourism possesses the highest percentage, since Sporades, Pilio, the coasts of Larissa, Olympus, Meteora and Lake Plastiras obtain increasingly more friends, who come from the very promising Russian market.

4.5 Possibilities and Perspectives

Based on the analyzed information in previous paragraphs, we will attempt to demonstrate the advantages and disadvantages of the Region of Thessaly. In the sub-paragraphs that follow, we will refer to the benefits of the region and later to the drawbacks, while in the end a short SWOT¹ analysis will follow.

¹ SWOT analysis is a structured planning method, used to evaluate the Strengths, Weaknesses, Opportunities and Threats involved in a project or in a business venture. A SWOT analysis can be carried out for a product, place, industry or person.

4.5.1 Advantages of the region of Thessaly

The region of Thessaly, with regard to its geographical position, is characterized by the following:

- Short and easy access to any place of the country.
- Climatological-ecological-environmental conditions that allow the quantitative production of products.
- Large and fertile plain that constitutes a strong productive base.
- Remarkable variety of ecosystems in the environment with specifically high aesthetics, cultural and historical value and particular beauty.

In addition to the above, when it comes to the economic and operational sector, the Region of Thessaly has:

- Differentiated economic base with significant presence in all production sectors.
- The primary sector has the natural advantage of the large Thessalian plain and figures in the second place in terms of size of cities of the country.
- There are many large businesses related to industry and commerce.
- The existence of economies of scale and concentration (Economies of scale are connected with large businesses and the lowest average production cost, while economies of concentration are associated with the co-existence of a big number of businesses in a region and the profits reaped from this collaboration).
- Important marble-bearing areas that are mainly found along the mountains of the eastern part.

4.5.2 Disadvantages of the region of Thessaly

As usual, the same is valid for our case, the region of Thessaly, beyond the advantages, has also some drawbacks. The main ones are summarized as follows:

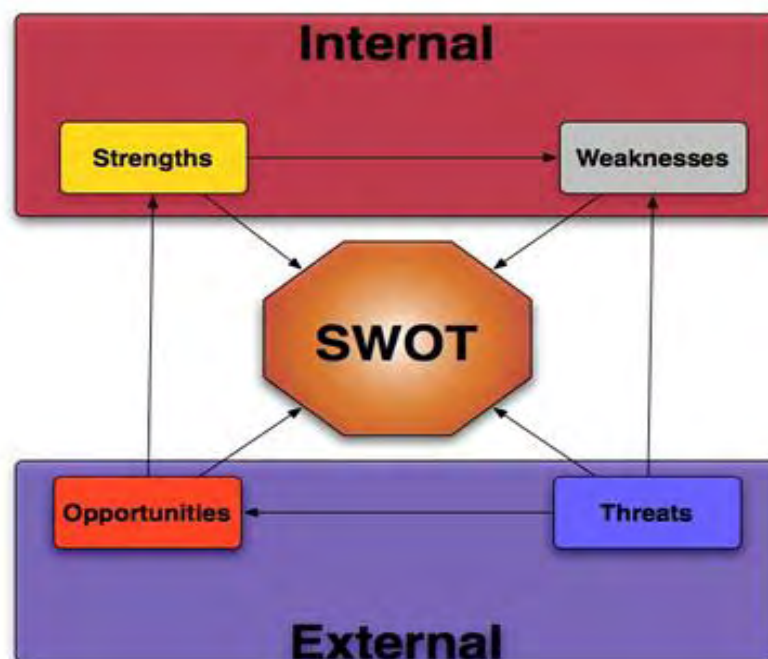
- The individuality that characterizes the four regional units and especially the dipole of Volos and Larissa.

- The exercise of the non-appropriate development policy by all competent bodies.
- The lack of strategy of openness that deprives the international public of Thessalian products, due to their non-organized export to the global markets.
- The turn of Thessalian farmers from the qualitative agriculture to subsidized business actions of doubtful performance (for instance, investment in photovoltaic systems for the production of electric energy) with the use of large areas of land of high productivity, leading gradually to the shrinkage of the agricultural sector.

4.5.3 S.W.O.T analysis for the region of Thessaly

Based on the above, we will aspire to conduct a brief SWOT analysis for the region of Thessaly (Fig. 4.5.3).

Figure 4.5.3.: SWOT analysis for the internal and external environment of Thessaly



Source: Internet, 2013

Its **strengths** mainly concern its position of vital importance, the primary sector (agricultural activities) and the tertiary sector (notably industry and tourism).

The weaknesses of the region are the drop of the industry branch, the depreciation of the agricultural land and the lack of coordination among the administrative bodies of Thessaly.

The threats are chiefly related to competition with other regions in order to attract investments and tourists.

Finally, **the opportunities** that should be exploited by the Region in the future are the re-activation of the primary sector and its geographical position for further development.

4.5.4 Conclusions

After the assessment of the abovementioned data, we conclude that in the following years there will be a strong interest and great demand for areas to be invested. Another element that reinforces this point of view is the GDP indicator of the region of Thessaly.

Table 4.5.4.1.: Produced GDP per capita of the Region of Thessaly, the regional units and of the whole country with the use of current prices during the period 2000-2008.

Region/Year	2000	2001	2002	2003	2004	2005	2006	2007	2008
Total	12.483	13.372	14.254	15.642	16.748	17.545	18.953	20.287	21.084
Thessaly	10.605	11.376	12.101	13.582	14.757	14.964	15.879	16.848	17.535
Karditsa	7.999	8.666	9.821	10.557	11.393	12.159	12.829	12.891	13.732
Larissa	11.735	12.573	12.839	14.861	15.863	15.618	16.563	17.827	18.244
Magnesia	11.942	12.873	13.587	15.162	16.185	16.689	17.861	18.996	19.845
Trikala	8.513	8.972	10.278	11.101	13.170	13.372	14.020	14.874	15.735

Source: ELSTAT

While observing table 4.5.4.1, we see that the produced GDP per capita in the Region of Thessaly, the regional units and in the total of the country presented an increase during the period 2000-2008. That period the average growth rate was 6, 5% annually and the

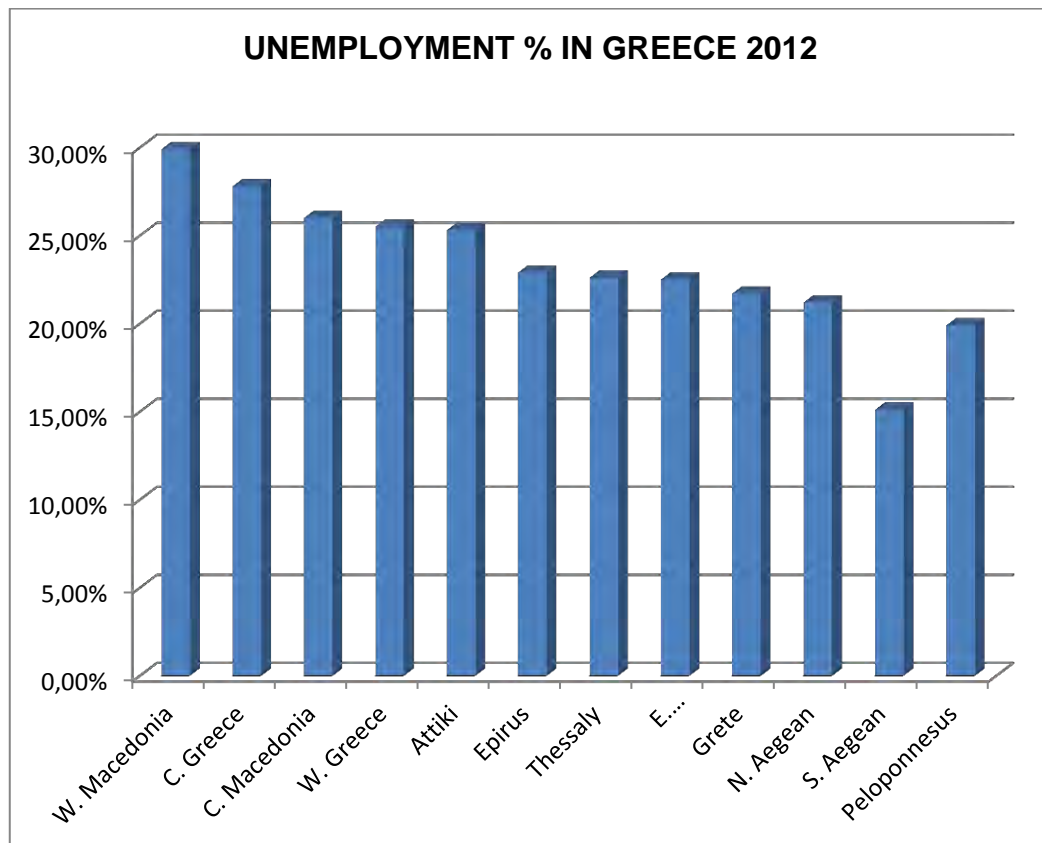
respective rate of the country was 7, 2%. The prefecture of Magnesia has the highest GDP per capita, followed by the prefecture of Larissa. On the contrary, the period from 2000 to 2008, the highest growth rates were noted in Trikala and Karditsa with 8% and 7% respectively. During 2009 and 2010, the GDP of the Region of Thessaly follows the decreasing tendency of the GDP of the country as a result of the economic crisis.

Table 4.5.4.2: Percentages of unemployment in Greece in 2012

	Region	%		Region	%
1.	W. Macedonia	29,9%	7.	Thessaly	22,6%
2.	C. Greece	27,8%	8.	E. Macedonia-Thrace	22,5%
3.	C. Macedonia	26%	9.	Crete	21,7%
4.	W. Greece	25,5%	10.	N. Aegean	21,2%
5.	Attica	25,3%	11.	S. Aegean	15,1%
6.	Epirus	22,9%	12.	Peloponnesus	19,9%

Source: ELSTAT

Diagram 4.5.4.3: Percentages of unemployment in Greece in 2012



Source: ELSTAT

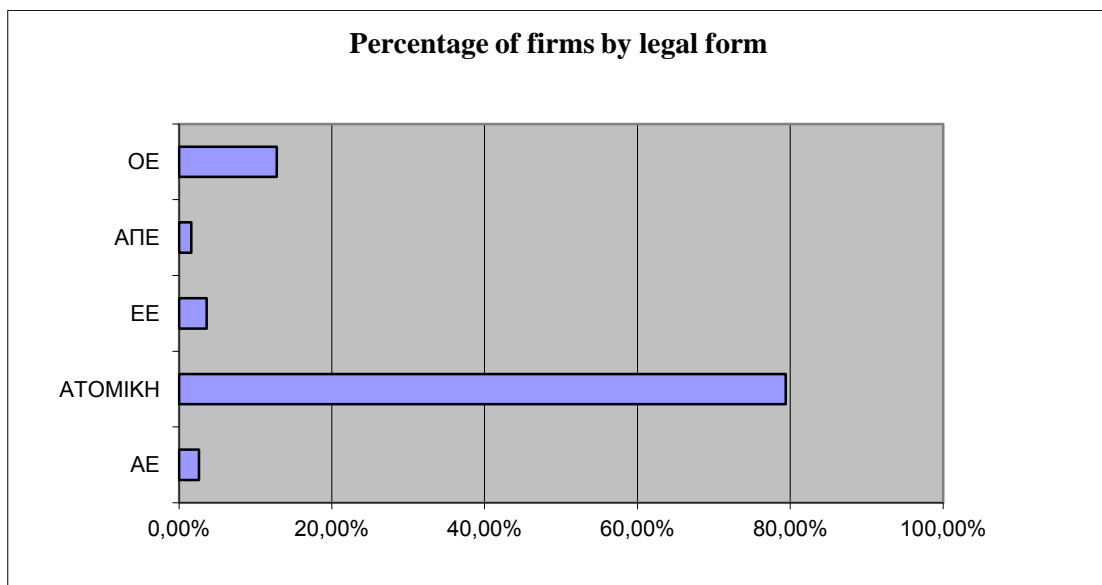
As far as employment is concerned (Diagram: 4.5.4.3), the Region of Thessaly reaches 22, 6%, 2, 7 units below the Region of Attica, an indication of the resistance of Thessaly that is due to the presence of the primary sector in general. We ascertain that the primary sector helps to keep the unemployment index down, at the lowest possible point, always compared to other regions, by facing it.

According to what was mentioned above, the region has a dynamic character and its gradual recovery of economy is expected to take place from 2014 and onwards and therefore the growth rate will increase, following the tendency of the national economy.

4.6 The Thessalian Businesses in the Decade 2002-2012

4.6.1 General overview

In the business map of the country small and medium-sized businesses predominate. The 98% of businesses employ less than ten people, while the 95% of them present a turnover less than 500.000 Euros. The greatest percentage of small and medium-sized businesses is possessed by businesses of trade (wholesale and retail), the revenues of which correspond to 43% of the total revenues, while the 11% of them is actively involved in industry and produces the 23% of the total revenues respectively. About the 90% of businesses function as single proprietorships, general partnerships (GP), limited partnerships (LP) and the 5% of them as limited liability companies (LLC) or sociétés anonymes (SA). More concretely, for the region of Thessaly, from all businesses that are active in the four regional units, the 80% operates as single proprietorships and the 20% as GP, LLC, LP or SA. More extensively, the legal form of Thessalian businesses is presented in table 4.6.1 that follows.

Table 4.6.1: Existing legal form of businesses

In conclusion, it is mentioned that the Region of Thessaly keeps up with the rates of the country and the Region of Attica as for the legal form of the function of businesses.

The spatial distribution presents great concentration in urban centers. Indicatively, the 35% of them are established in Attica, where the 67% of the total turnover is realized. Respectively, the 6, 1% of them are located in Thessaly and the 3% of the total turnover has achieved in the region. The distribution of businesses and of their basic sizes per sector of the economic activity is very interesting. From the consideration of the related information derives that industry holds the most significant position and its shares on assets and sales reach 65%. Trade and other services follow having much lower participation.

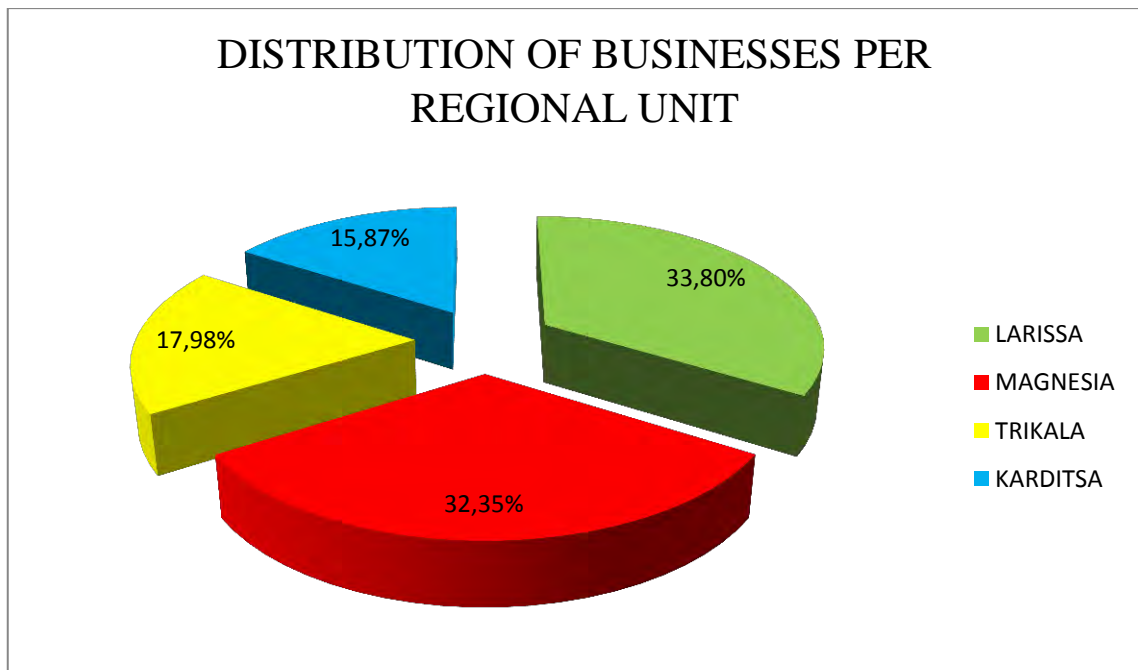
4.6.2 Business activity

All the above, naturally, create incentives for the development of the existing businesses and the establishment of new ones, contributing simultaneously to the creation of economies of scale. The external economies constitute a basic factor of the attraction and orientation of economic activities to large urban centers and blooming regions. The

services offered by big cities, equipped with the developed transport and communication systems, the infrastructures, the group of the specialized workforce and the existence of technology development and production centers, create important external economies and advantages to the businesses that belong to these regions (Polyzos, 2011). Nevertheless, it is known that the big number of businesses indicates to some extent the size of the economic development of a region, a fact that denotes that the creation of new businesses and the growth of already existing ones constitute the most important part of the economy, in other words, they form the backbone of the national economy of a state and by extension of regions.

According to the statistical data of the four Chambers of Thessaly, which are at our disposal, businesses that were activated in Thessaly during the last decade and more concretely the period 2002-2012 were on average 48.000 and from which the sole proprietorships possess the greatest percentage, as analytically mentioned in paragraph 4.6.1. The distribution of Thessalian businesses per regional unit is shown in diagram 4.6.2.1 that follows.

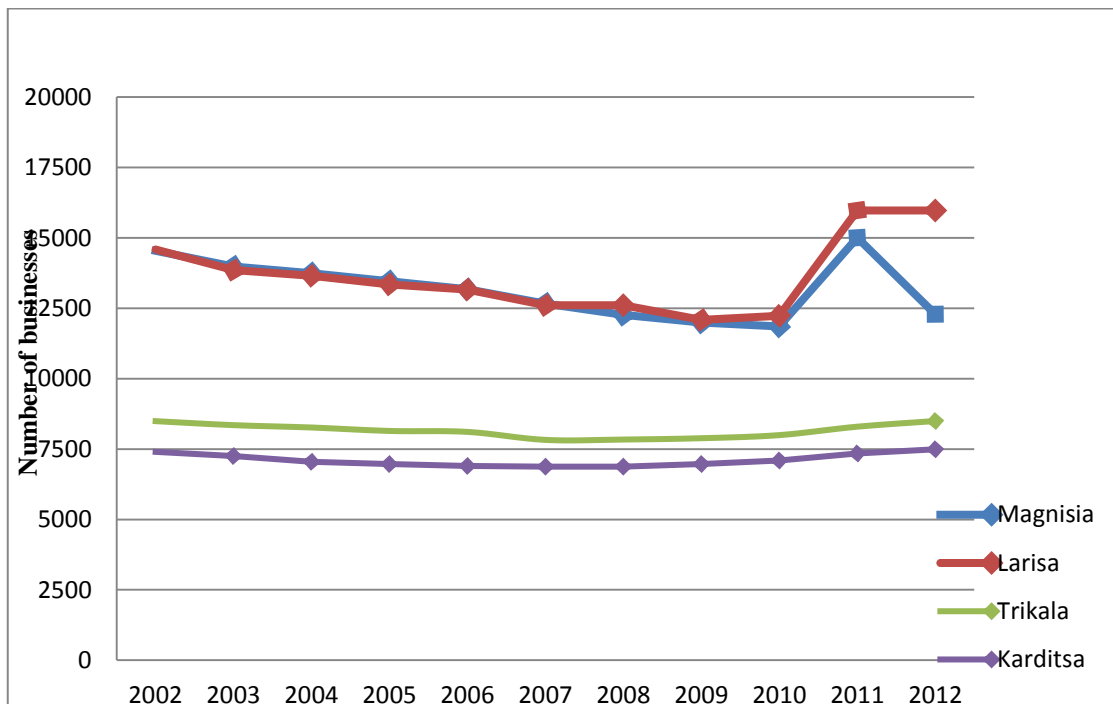
Table 4.6.2.1: Distribution of businesses in Thessaly



Source: Regional of the Thessaly

More analytically, for the four Thessalian units that are depicted, we ascertain that since 2008 and then, the deletions, occurred in the Chambers of Commerce and Industry of the four regional units, are more than the registrations of new businesses. Indicatively, it is mentioned that the period 2009-2010 the most deletions of businesses are noticed. This fact clearly reflects the onset of the economic crisis and how it influenced and has been influencing till nowadays Thessalian businesses.

Table 4.6.2.2: Evolution of the number of businesses per year



Source: Chambers of Thessaly

4.7 Existing Status of Thessalian Businesses

In the wider area of the region of Thessaly, according to the estimates of Chambers of Commerce and Industry of the four regional units, it was ascertained that the majority of businesses faces common problems of viability. More extensively, the following are mentioned:

- They do not interrupt or suspend their operation, except for the micro businesses. In many cases there are large businesses that terminate their activities.
- There is a local concentration of the closed businesses. When a business closes, another one opens.
- There are professional spaces, which remain untapped for long periods of time.
- One per two entrepreneurs in the wider area of Thessaly considers that there is a strong probability of shutting down his business in 2013.
- Entrepreneurs are in favor of reduction in pay, while the 83% of them thinks that the pay cut will not provoke increase of the competitiveness of businesses and economy.

To sum up, the economic conjunctures have led to the suspension or end of the operation of small and medium-sized businesses in the wider area of Thessaly. The adoption of more adverse financial measures as to the consolidation of the Greek economy has undoubtedly driven to the escalation of these phenomena, which impede the smooth operation of businesses. By reflex, the other businesses are affected, because they are collaborators, clients and suppliers of these businesses.

4.8 Conclusions

The opportunities created by the external environment by the upgrade of the infrastructure and provided services e.g. the ability to achieve high speed in the railway axis of Athens-Thessaloniki-Eidomeni, the best possible exploitation of the Port of Volos and the extension of the natural gas network, give an important European and national dimension that will permit businesses to take advantage of the backbone of the national system of transport and energy by transferring their products rapidly and at lowest cost to the markets of the Balkans and the European Union.

The above will contribute to the development of the existing businesses and the creation of new ones. According to conducted surveys, large businesses, which do not necessarily represent the local capital, choose consciously the region by assessing its

characteristics and reject other regions upon evaluation. Therefore, any business activity sets the basic goal of the selection of the appropriate position in order to fully exploit the comparative advantages by which the region of Thessaly is undoubtedly characterized.

CHAPTER 5

Subsidies of Thessalian Businesses and their Innovative Activity

5.1 Introduction

Aiming at the strengthening of the well-balanced development, the increase of the employment, the amelioration of competitiveness of the economy, the reinforcement of entrepreneurship, the promotion of technological changes and innovation, the protection of the environment, the conservation of energy and at the achievement of the regional convergence, Greece and the European Union provide in common co-financing of investment plans based on the Law 3299/2004. As investment plans, in the context of the present law, are considered to be the investments, the business plans and the leasing programs. The investment plans that are subject to the provisions of the present law are provided with the following types of assistance:

- Subsidy that includes the free provision of an amount of money by the Public sector for the coverage of a part of the aided expenditure of the investment plan.
- Subsidy of leasing that consists in the coverage of a part of instalments of the leasing, paid by the Public sector, which is agreed in order to obtain mechanical and other equipment.
- Tax exemption that amounts to a certain percentage or the total value of the aided expenditure of the investment or to the value of the leasing of the new mechanical and other equipment, the usage of which is obtained. This assistance lies in the exemption of the payment of income tax of non-distributed profits from the total of activities of the business, since the first decade during which the investment plan was realized, with the formation of equivalent untaxed reserve.
- Subsidy of the cost of the employment, created by the investment plan, which consists in the two-year coverage by the Public sector of a part of the payroll cost of the created job opportunities within the first three years after the completion of the investment plan.

The above types of financing assistances are alternatively provided as follows:

- Subsidy or/and grant of a leasing.
- Tax exemption
- Subsidy of the cost of the created employment.

Some investment plans being subject to the provisions of the Law 3299/2004 can be included in the Operational Programs of the National Strategic Reference Framework (NSRF) 2007-2013.

5.2 Financing of Thessalian Businesses

As it was mentioned above, the Law 3299/2004 is a regime of incentives towards the private investments and its provisions are compatible with the Legislation of the European Commission about the State Assistances. It provides aids for investment plans, the object of which covers all sectors of the economic activity.

Thus, according to the official information about Private Investments for Development Programs of the Region of Thessaly that is available, during the last decade, 110 new investments were realized, which were approved and financed by the Law 3299/2004. The number of new businesses is certainly small, if compared to the size of the region and to the fact that in the registries of Chambers of Industry and Commerce during the period 2002-2012 12.000 businesses were registered on average. This fact, according to the people in charge of these programs, i.e. related to the rejection of investment programs, is due to:

- To a great degree to the maturity of investment plans. In other words, certain investment plans are excluded because of immaturity and there is no sufficient sureness as to their completion within the programming period according to the commitments of the respective axis of priority. The commencement of operation and later the collection of a part of the aid are the guide of the maturity of investment plans.
- The fact that the branches of the still mill, synthetic fibres, naval architecture and of shipbuilding are not subject to the provisions of the present Law,

businesses that operate under a specific legal form and investment plans of public companies.

The new financed investments are divided into four sectors. The 1st sector includes the secondary sector, refers to the manufacturing sector and concerns the total of investments. The 2nd sector includes the primary sector and as a whole deals with agricultural activities. The 3rd sector concerns the tourism investments on the whole and finally the 4th sector contains all businesses of service provision. The 3rd and 4th sectors are included in the tertiary sector. In the table that follows the sectors and subsidies in euros per sector are presented for the time period 2002-2012.

Table 5.2: Subsidy per sector

SECTORS	TYPE OF ACTIVITY	SUBSIDY (€)
1 st Sector	Manufacturing-Metallurgical companies	65,490,679.84
2 nd Sector	Primary Sector	1,457,000.00
3 rd Sector	Tourism Businesses	24,699,829.00
4 th Sector	Service Provision	9,508,933.00
TOTAL	-	101,156,441.84

Source: Regional of the Thessaly

It is evident from the above table that for the development, aid and creation of new business activities in the Region of Thessaly during 2002-2012, the amount of 101,156,441.84 m. €, a relatively small amount has been granted, if we take into consideration the size and dynamics of the region as well as the contribution of the region to the national GDP of the country. The divergences between the distribution of investments and regional aids are indicative of the weakness of competent bodies to perceive the national economy as a component of the system of regions.

5.2.1 SECTOR 1

The region of Thessaly and particularly the regional units of Larissa and Magnesia have a long-term industrial tradition in steel mill, aluminium and metal constructions. It has several large businesses, equipped with a very well specialized staff, and despite the existing crisis of the branch, they keep on producing, increasing their productivity and updating their products through the research on innovative technologies. Therefore, in our case, all related metallurgical businesses of the sector 1 spend, depending on their size, about 10%-25% of their profits on research and technology (R.I.P.T., 2013). As far as the creation of job opportunities is concerned, except for a business which employs 41 persons, the rest ones have on average 6 employees. This indicates that these businesses innovate when it comes to the production line and industrial equipment and consequently the job opportunities and the operating cost of the business decrease. Nevertheless, researches mention that remarkable improvements in the results of innovation can be achieved by the integration of the technological and organizational innovation (Scott, 2000).

5.2.2 SECTOR 2

The primary sector in Greece continues to be one of the basic sectors of the economy, having a particular social and environmental role, since it produces an important part of the Gross Domestic Product. Moreover, the primary sector in our country and especially agriculture has a significant place as a sector of the economic activity and as a factor of maintenance of the social and economic cohesion for many regions of the Greek territory too. In Thessaly the sector of agriculture is on the rise with signs of upward trend.

In the sector 2, where the primary sector is included and characterized as “intensity of work”, we see that the created job opportunities by the subsidized businesses range from 2 to 5 on average. This fact leads us to the conclusion that the turnover takes place with the aid of technological equipment (mechanized cultivation) that constitutes an innovation example. Due to the fact that the educational level of employees in the primary sector is low, the problem of competitiveness is called to be solved by the University of Thessaly transferring the know-how and developing new innovative actions in cultivations. It is obvious from the above that in order to achieve the sustainability of agricultural exploitations via the production of competitive

products concerning quality and prices, the excellent technological solutions, depending on the case, which will have the best possible performance and the lowest possible cost, should be selected.

5.2.3 SECTOR 3

The branch of tourism businesses is characterized by high level of competition and constant renewals. Innovation in above businesses is necessary not only for the survival but also for the long-term balance and profitability and it ranges from the full innovation that consists in complete and new products and services available on a new market to smaller modifications of the existing services (Ottenbacher, 2007).

The sector 3 includes the branch of tourism businesses that consists of small and medium-sized business on the whole. The branch of tourism businesses is characterized by “intensity of work”. According to the data of the Region of Thessaly, the sector creates most places for work. Therefore, in the subsidized businesses, the new vacancies for work range on average from 30 to 110. This fact indicates that as far as work is concerned, no type of innovation is developed. Innovation activities are undertaken by tourism businesses in their organizational structure. Another feature of the branch is the management. The adoption of different management methods in the above businesses is rather ordinary. Empirical researches that have been conducted show that the professional management contracts provide a better environment for innovation (Orfila-Sinten et al., 2005).

Consequently, in our case, the innovative activity focuses on the organizational structure of Thessalian tourism businesses, where the introduction of innovation increases the competitiveness through:

- The decrease of cost.
- The increase of profit.
- The upgrade of provided services.

5.2.4 SECTOR 4

When it comes to the sector 4, we observe that the subsidized businesses that are actively involved in the provision of medical services and in general all those businesses that deal with hospital activities employ from 20 to 90 persons on average. The “intensity of work” is possible but the difference lies in the fact that the staff of these businesses is educated and specialized. Finally, in the case of rest of businesses that provide services, it is valid what was mentioned in the sector 3 in relation to the application of innovative processes that mostly concern their organizational form.

5.2.5 Conclusions

The branch of manufacturing and metallurgy with little fluctuations is stable, while it gets the first place as far as subsidies are concerned.

The contribution of the value added of every branch of the economic activity to the development of a region depends on many factors and forms the productive profile and the development standard of a region. Therefore, while the branch of agriculture has in general smaller value added compared to industry, in an agricultural region, such as Thessaly, it could contribute higher percentages to their development in contrast to industry. Nevertheless, we see that the new subsidized businesses receive the lowest grant.

Nowadays, the existing development tendency is the turn to activities in the sector of services, because they are considered to have higher value added compared to those of the production sector. The strengthening of the development tends to be based on sectors that bring bigger multiplying profits. Consequently, Thessaly offers a great variety of options for the activation in the sector of services. This is evident from the subsidies that concern the sector 3 and 4. From table 5.2 we notice that the 1/3 of subsidies is related to the sector of services.

5.3 Other Forms of Financing

The National Strategic Reference Framework 2007-2013 constitutes the reference document for the planning of the Funds of the European Union at a national level for the period 2007-2013. It was hammered out in the framework of the new strategy of the approach for the Policy of Cohesion of the European Union. The strategic planning of the country for the period 2007-2013 is implemented through the Sectoral Operational Programs, the Regional Operational Programs and the European Territorial Cooperation Programs. The beneficiaries are public or private organizations, bodies or businesses that are competent to start or realize actions. In the context of regimes of assistance by virtue of the article 87 of the Convention, the beneficiaries are public or private businesses that perform an individual project and receive public aid (Ministry of Economy & Finance, 2007).

Certain investment plans being subject to the provisions of Law 3299/2004, as analyzed in the paragraph 5.1, are able to be included in the Operational Programs of the National Strategic Reference Framework (NSRF) 2007-2013.

Since June 2010, the European Investment Fund, which specializes in the financing of micro and medium-sized businesses, has been operating the European Mechanism for Microfinance “Progress”. The above plan is an initiative of the European Union (EU) in order to face the results of the economic crisis. The financing of micro businesses puts an emphasis on the youth and female entrepreneurship, the newly created businesses and the self-employed workers (less than 10 employees including the self-employed) (European Investment Fund).

Another program that was under progress and ended in March of 2013 was the **ICT4Growth innovation**, which concerned the aid of businesses for the implementation of investment plans including the provision of innovative value added products and services. The **ICT4Growth** action amounted to 120 million € in order to support small and medium-sized businesses that are active in the sector of information and communications technology. The assistances in R&D aim at encouraging businesses in order to undertake complementary activities of R&D that will be added to the activities conducted on a daily basis. They can also boost those businesses that are not related to R&D so as to undertake this type of activities. These incentives have to be clearly described.

5.4 Other Subsidized Innovative Businesses

By the above programs during the time period 2007-2013 more than 19000 newly established Thessalian businesses have been subsidized. The percentages per regional unit are about:

- Larissa 35%
- Magnesia 35%
- Trikala 20%
- Karditsa 10%

The greatest part of this total concerns sole proprietorships. We note that businesses characterized by “intensity of capital” for investments are reluctant, because, for the time being, they are influenced by the existing economic crisis. The subsidized businesses, in order to manage to survive, since a great percentage of them is actively involved in the same sector, through competitiveness and differentiation of products and services, become antagonistic via the differentiation of their products, the daily innovative activity that includes innovative ideas with minimum cost and finally via the qualitative superiority of their products and services.

To sum up, we would say that for the aforementioned reasons many possible entrepreneurs devote time to detect the gaps in the market as well as to find ideas either by traveling abroad or by meeting people with different ideas and specializations. A typical example is the case of an entrepreneur from Larissa, who applies innovative ideas to the production by introducing ideas from the neighbouring country. Another case of innovation concerns discount stores that operate in the region and which increase their revenues by employing less persons and having simpler space arrangement.

5.5 Problems of Innovation

The first conclusion for the obstacles met by businesses in their effort to innovate is the existence of differentiation among micro, small and medium and large businesses. However, further differentiation among micro, small and medium and large businesses is not observed. The most important group of obstacles (for all business categories) is

the economic obstacles, such as the excess risk that the development of innovations involves, its high cost and the lack of appropriate sources of financing. The high cost and risk form an expected percentage of profit, which is not pretty high, in order to promote their development. Beyond the economic obstacles, another series of factors accelerates or deters the development of innovations. Concretely, for small and medium-sized businesses, the most significant factors are the organizational difficulties in the business and the lack of specialized staff. In micro businesses, the above problems appear as being of lower priority. The dimension of organization has already been mentioned in the part where bibliography was analyzed. The problems that are often reported have to do with factors such as:

- The collaboration of diverse departments inside the business (e.g. between the department of marketing and sales and the RTD department, between the RTD department and the production and after-sales services.
- The lack of the environment that will facilitate the information flow, the creativeness, the exchange of ideas, the management of knowledge and the undertaking of initiatives inside the business.
- The lack of specialized staff, which is not only due to the problems of the business e.g. inability to accept the cost, seek or choose, but also, in many cases, to the shortage of specializations. In the last years, this weakness tends to be eliminated and the University of Thessaly contributes to this direction.

In some cases, there are reasons for which the innovative activities cannot start or do not lead to the expected results. The economic reasons are those that are mainly developed and impede these activities and which concern the extremely high cost, the detection of a really high risk, the lack of financing sources, the great period of amortization of innovation as well as factors related to business e.g. insufficient workforce of innovation (RTD, planning etc.), lack of specialized staff, incomplete information about issues of technology and market, difficulty in checking the innovation cost, intra-company resistance to change, inadequate services of third parties, shortage of collaboration opportunities etc. Other reasons that hinder the route towards innovation are the lack of infrastructure and opportunities for the development of technology, low response of the clientele to new products and processes, legislation, norms, regulations, standards, taxation, weaknesses in the legal framework for

copyright, limited need for innovation due to its previous applications etc. (Eurostat 2000:91-93).

In the primary sector and particularly in agriculture the production, transfer and diffusion of the know-how and innovations to the Greek agricultural sector present deficiencies of mainly qualitative character and difficulties in adapting to peculiarities of the Greek agricultural exploitations. In the region of Thessaly the following are observed:

- There is great dependence on the community subsidies.
- Persistence in monoculture.
- Reduced agricultural entrepreneurship and troublesome disposal of agricultural products.
- The majority of the productive units of the primary production are small and of fragmented nature and they do not obey the rules of horizontal integration and therefore they cannot exploit the advantages of the collaboration and the increased power to negotiate. The consequences of all these are the high production cost, the low competitiveness and the reduced incomes.

The production of the know-how and innovations arises from the agricultural research, which is conducted in our country and covers a little part of the demand of farmers and of any other people that deal with the sector of agriculture, forestry and foodstuff. This is due not only to the quality of results of the Greek applied research but also to the lack of connection mechanisms with the production in order to be exploited by businesses that pertain to the sector of agriculture, forestry and foodstuff. There are particular needs for the development of the primary sector in order to promote research and innovation in sectors relevant to the genetic improvement of kinds of crop and animal production, the improvement of the equipment and production practices as well as the introduction of new innovative products (Ministry of Rural Development, 2013).

The branch of industry and manufacturing contributes steadily to the development of the Region of Thessaly. The secondary sector is more developed in Magnesia and then Larissa, Trikala and Karditsa follow and the branch of industry will be under pressure and for this reason it has to be assisted in any manner. Despite the de-industrialization of the region due to the economic crisis, it remains the strong core of

the real economy and a dynamics with indications of marginal development in the future continues to exist.

The tertiary sector in the Region of Thessaly is relatively weak and falls short of percentage, compared to the national average, but by all means it contributes to the increase of the regional GDP. The strengthening of the development of the services' sector brings multiplying profits to the economy. In the structural features of the services' sector the following are included:

- The sole proprietorships constitute the greatest percentage.
- Deficient development of the financial services, the research services and the logistics services.

With multilateral knowledge and in constant touch with the scientific, research and implementation bodies as well as with the key words “research” and “development”, the Region of Thessaly must exploit the possibilities and opportunities that are created in all sectors by “generating” policy, which, being integrated into the activities of local businesses, will be transformed into practice.

CHAPTER 6

The Concept of Competitiveness

6.1 Introduction

The concept of competitiveness is multi-dimensional and arises from the composition of economic concepts and ideas that mainly derive from the area of management science. It is defined in relation to the performances and characteristics of other economies that participate in the global system. Moreover, the competitiveness is relevant to the commercial performances of economy in a wider sense, i.e. to the movement of goods, services, capital and know-how. For many years, most analysts assign an economic meaning to the concept of competitiveness, putting, thereby, emphasis on economic terms, i.e. on factors of cost and prices identifying competitiveness with the concept of the comparative advantage. In this light, several factors, not associated with prices, were confused but they were important to the country, which is under the phase of economic growth. In our times, where a globalized economy exists, the competitiveness of national economies is of vital importance to the long-term development of the standard of living of citizens, the level of employment and social cohesion and to the quality of life of citizens living in an economic environment. For this reason, the developed and developing countries set the goal of the improvement of their competitiveness in a constantly growing and globalized environment.

6.2 The Concept of Competitiveness in Regions

Competitiveness undoubtedly constitutes an important factor to the achievement of the development of local economies, which can be pursued in two ways:

- Either through intensity of work and low prices of salaries of employees that are much discussed today.
- Or though ceaseless effort to improve the quality of products, innovation and diversity.

Competitiveness at a regional level constitutes a component of competitiveness at a national level and is connected with the general performance of economy when it comes to the macro-economic sizes, such as the economic development, the employment and

income distribution (Krugman 1994, Porter 1990, Porter et al., 2000). Therefore, we ascertain that nowadays competitiveness is of crucial importance to the long-term development of the standard of living of citizens and has become basic care of all involved bodies of the local government. Thus, the competitiveness of local businesses, which is attained through the achievement of goals mentioned above, contributes to the increase of the standard of living, the social well-being and of the regional development. Furthermore, the concept of competitiveness is unbreakably linked to the prosperity of a country and in general to the upgrade of the standard of living of citizens. We also know that the starting point for the welfare of a country is its regions. Consequently, in our case, the well-being of citizens of the region of Thessaly depends on the productivity of the economy, which is measured by the value of products and services that are produced per unit of human, natural and capital resources of the region of Thessaly. In this way, the level of productivity and the investment performance specify the level of prosperity that can characterize a local economy.

6.3 The Relationship of Innovation with the Thessalian Businesses

According to international comparisons and indicators, the level of innovation of the Greek economy is comparatively low, a fact that undermines the reassurance of conditions of self-sustaining development. According to the report of the Economic University IMD in Switzerland on global competitiveness, Greece holds the 54th place among 60 countries.

Table 6.3.: Eurozone Countries

Country	Status
Germany	9 th
France	28 th
Italy	44 th
Spain	45 th
Portugal	46 th
Greece	54th

Source: Internet, 2013

In table 6.3 we see that Germany gets 9th place, compared to 16th place that was found in 1997, “for the sake of exports, the strong sector of small and medium-sized businesses, the financial discipline of the country and of the high training of employees”, while the southern countries, which face an economic recession, are found in last places.

The level of innovative actions of the region of Thessaly follows the national level. More concretely, for the region of Thessaly, we see that the level of the innovative and research action remains particularly low, as it happens in other regional units of the country, except for the Region of Attica, which is considered the measure of the comparison for the rest of regions, while businesses usually transfer and adopt innovations that have been developed somewhere else and are not based on the primary sector of technology. This happens mainly for two reasons:

- In the first place, because of the fact that most businesses consist of small and medium-sized and newly-established businesses with low capital intensity.
- In the second place, due to the size of the market, businesses do not risk undertaking investments that concern the creation of new innovative products.

The analysis of indicators of innovative activity (Petra^{akos} et al., 2008b; Petra^{akos}, 2009b) shows clearly that Thessaly, as a regional productive system, presents a significant lack of development of innovation in relation to more dynamic regions of the country (notably Attica and Central Macedonia) as well as to the average of the 25 member states of the European Union. Based on the RRSII synthetic index, the region during the period 2002-2006 ranks in 200th place among 203 regions of the EU with index price 0, 10 and it gets 7th place in the ranking of 13 regions of Greece with an average price that corresponds to 45% of the national average and to 29% of price of Attica. These data indicate an important lag, which, instead of decreasing, tends to increase over time and affects the possibilities of restructuring and development of its local regional economy in the long term.

6.3.1 Obstacles to the action of Thessalian businesses

Respondent Thessalian entrepreneurs remarked the inefficiency of cabinet members and the frequent “not particularly friendly” business environment. Therefore, according to their statements, the most often problems that they face during their business actions have to do with the following:

- The bureaucracy and overregulation of the Greek public sector.
- The tax policy of the state, which does not help to the development of entrepreneurship.
- The great introversion and the intense disbelief for the development of collaborations – the smaller the business the greater the disbelief, while the innovation indicators are heavily contradictory.
- The lack of access to financing (e.g. programs and community resources).
- The role of syndicates.
- The unfair competition, derived from the uncontrollable introduction of products to third countries.

6.4 Conclusions

The productive structure of economy in Thessaly during the period 2000-2009 evolved following the wider development policies of the country as well as of Europe. In the primary sector, there was an increase of the production cost on the one hand and decrease of the gross produced income on the other hand and consequently its competitiveness is attacked. This is evident from the reduction of the workforce, which, from 2001 to 2008, amounted to 19%. Upon the beginning of the economic recession, a turn of the workforce to the primary sector was presented and consequently the percentage increased by 16% from 2009 to 2010. The specific turn to the primary sector has to be confronted with particular seriousness, because it can constitute a development driver in gloomy economic periods contributing simultaneously to the increase of competitiveness of the country. It is easily ascertained through the study of the agricultural sector that it continues to lag behind, mainly oriented to the production instead of market, without modern structures and administrative pyramid and isolated in the edge of Europe without planning.

CHAPTER 7

Innovation, Entrepreneurship and Crisis

The recession has been “rooted” in businesses of Thessaly and Central Greece, as it results from the data of the research that was conducted in the 2nd semester of 2012 of the Federation of Industries of Thessaly and Central Greece. The saying “Every last year is always better than this year” is confirmed by this research too”, stated characteristically, while presenting the data of the research, the Director of the Federation, Mr. Apostolos Papadoulis. The indicators show that businesses that carry forward are small and medium-sized businesses that deal with the production of consumer goods (mainly foodstuff), whereas the micro businesses (up to 20 employees) face most problems. The “champion” of firings seems to be Karditsa, while, during the 2nd semester of 2011, the operational contracts appeared. Businesses with bigger pressure are the micro ones and then follow the medium ones. The credit crunch, faced by businesses, is by far a question of major importance that concerns their survival. Capital businesses seem to be almost excluded from the banking financing and follow those that trade intermediate goods. The reassurance of fluidity and the reduction of insurance contributions and tax rates constitute today for businesses high level expectations of next government choices. Based on employment, medium businesses seem to have been under more pressure and were forced to recur to firings to greater degree, compared to other two categories of businesses.

To sum up, the image of the 2nd semester of 2012 as well as of the whole previous year continues to underline the difficult conditions and the uncertainty under which the productive businesses of Thessaly operate. From the data that define their basic problems, the one that predominates is the lack of economic fluidity that arises from the fact that the domestic productive community functions despite the absence of the banking financing. The fact that the domestic market continues to exist, the exports are implemented, the investment initiatives are performed, while the banking financing is almost unreal and the obligations of the state towards businesses are hardly fulfilled, is unique. The reform in taxation does not exclusively have to do only with the reduction of tax rates but also with the grid of direct and indirect tax burdens e.g. energy, one of the highest tax burdens in Europe that weigh the capital and not the profits. The reform in the non-payroll cost that will reduce the cost of insurance contributions, which is one

of the highest among the member states of the OECD, the efforts to combat bureaucracy, which still keep on burdening economy and the business work with huge costs constitute some of the fields through the improvement of which businesses expect aids that are inexistent for the time being. This assessment is particularly crucial in order to define the optimism of businesses of the sample, which estimate that the recovery of the real economy will be obvious in 2012 and then.

Thus, having taken into consideration the existing formed situation, we conclude that most businesses delay or cancel initiatives and various development actions of innovation that they would possibly implement in a period of growth. An indicative element of the situation that once existed and still exists is the delay as to actions of NSRF due to the lack of fluidity faced by banks.

CHAPTER 8

Conclusions-Suggestions

8.1 Introduction

Upon the completion of the study of the bibliography and the collective processing of data that were analyzed in previous chapters, the present chapter ventures to draw conclusions and submit suggestions for further exploration of innovation in the financed Thessalian businesses and the ones that are expected to be financed in the future by different development programs.

8.2 Conclusions

From the information that has been examined, it is evident that Thessalian businesses and generally speaking small and medium-sized and newly established businesses present high dependence on domestic demand and reduced reliance on international demand.

On the other side, the rapid changes that occur in technology and information are not compatible with changes that take place in Thessalian businesses, which watch a slow rate of change that derives from the external environment. This means that the production system of businesses does not play roles of innovative activity but adapts to changes imposed by the external environment. For this reason, businesses have to proceed to prompt and dynamic changes that are increasingly oriented to the preferences of the client, the quality, the research and technology in order to obtain a forceful competitive advantage in the domestic and globalized environment. Furthermore, the conclusion that is drawn from the research is that innovations, to the extent that they exist and are used by Thessalian businesses, are gradual and not dramatic or radical. Small changes are chosen more and the important ones to a lesser degree. The one reason is the fact that big changes create greater expectations and anxieties and it is difficult for business to shoulder them today. On the contrary, the little gradual changes and improvements in products or services provide greater

certainty that they change but are not transformed, as stated a businessman, friend of mine, from Larissa.

Moreover, a great percentage of innovations concerns goods and services and not processes or management methods. Thessalian businesses pay attention and focus on equipment (Petraikos, 2011). This is due to the fact that changes in management methods require radical innovations and rearrangement of business policy that in many cases businesses are not willing to attempt.

Another example of innovation in services of Thessalian businesses and particularly of the small and medium-sized ones is the introduction and usage of technology and information. Technological innovations are considered to be fully beneficial to businesses, because, on the one hand, they employ less staff reducing, thereby, a lot the expenditures for the payment of salaries and becoming more competitive and on the other hand the production is checked at mechanical and technological level.

Another especially important element that arose from the bibliographic and empirical research is the almost total lack of expenditures from the part of businesses with regard to research and development. The level of research and development in Thessalian businesses is very low and also the research and development are not conducted in a scientific way, because the external relationships of businesses with the local University, the research institutes and the local organizations are of low level. On the other side, it is understandable that newly established businesses that are possibly financed by diverse development programs are not able to spend money on research and development.

The human resources of Thessalian businesses are a particularly significant aspect for the successful adoption of innovation, given that the reduced work supply leads to their increasing training and consequently the people that are hired have additional education, beyond the expected. Thus, a well-trained, educated and sensitized staff contributes to the strengthening of innovative activities.

In conclusion, Thessalian businesses have to keep alert towards new technological trends and to be ready to develop innovative actions at any moment. It is true that the workforce of Thessaly has severe weaknesses (Petraikos, 2011). Nevertheless, under

specific policies of assistance, it would be driven to the collaboration with structures that will offer access to results of research by reliable bodies with certified experience and certain competence.

8.3 Epilogue

The present dissertation constitutes an occasion to explore innovation in Thessalian businesses, which were subsidized by various development programs. Despite the fact that the current economic status of the country impedes any new business effort, it is estimated that in the following years this situation will change in terms of economy and adoption of business culture, because it is about a relatively dynamic region as far as the Greek conditions are concerned with very positive perspectives when it comes to spatial development. It is underlined that the collaboration with the local Institutions of Higher Education, the research institutes and the local organizations is quite important, because in the end local businesses through the exploitation of their results are winners.

REFERENCES

Greek-language literature

Petrakos G. (2009), Strategic plan for the development of innovation in Thessaly, Research Project, University of Thessaly.

Georgada Zoi "Entrepreneurship and innovation, management innovation of Business" Anikoula, 2003.

Konsolas J, N, (1997), Contemporary Regional Economic Policy. Athens: Papazisis, 49-52 Konsolas 1997: 231-232.

Comminos N., Kyrgiafani Lina Sefertzi Helena, 2001. "Development Innovation in Districts and production complex." Publications Gutenberg, Athens

S. Polyzos, Regional Development, public kritiki, 2011

L. Labrianidis, (2011). The phenomenon "Brain-Drain" in Greece. Public kritiki.

Reklitis, F (1998) Innovation and Competitiveness: The Case of Greek Industry, Athens 1998, PhD Thesis.

Regional Innovation Pole of Thessaly (RIPT)

Ministry of Rural Development and Food-National Strategic Rural Development Plan, 2007-2013

Scientific journal "aeichoros", 2009

Study IME GSEBEE (2009)

"Innovation the road to success", I.A.N.G, (Thessaloniki, 2006).

Newspaper "Vima" 10/03/2013

Larissa Chamber of Commerce and Industry

Volos Chamber of Commerce and Industry

Trikala Chamber of Commerce and Industry

Karditsa Chamber of Commerce and Industry

Regional of the Thessaly

Foreign language

Andretsch D. B. (1998) “Agglomeration and the location of innovative activity”,
Oxford Review of Economic Policy.

Camagni R. P. (1995), “The concept of innovative milieu and its relevance for public
policies in European lagging regions”.

Pellissier R. (2008), “A conceptual framework for the alignment of Innovation and
technology”, Journal of Technological Management and innovation, book 3 page
67-77

Porter M., Stern S. (2001), “Innovation, in the form of new products, processes, and
ways of managing, underpins the growth of productivity that is necessary for a
rising standard of living”, MIT sloan Management Review summer 2001, tom 42,
ar 4

D. Vahs and R. Burmester, Innovations-management: Von der Produktidee zur
erfolgreichen Vermarktung, (Schäffer-Poeschel, Stuttgart, 2005).

Turbin Patrick, “Enterpreneurship and Creativity in Business Growth and Value”,
Kingston University, London, 2002, MBA handbook, section 2.

Tidd J, Bessant J. & Pavitt K. (2001) Managing Innovation: Integrating Technological,
Market and Organizational Change, J. Wiley, New York.

Allan Afuah, ”Innovation management: Strategies, implementation and profits”, Oxford
University Press Inc., 2003.

- Orfila-Sinter, F., Crespi-Cladera, R & Martinez-Ros, E. (2005) Innovation activity in the hotel industry: Evidence from Balearic Islands. *Tourism Management*. Vol.26, No 6, pp.851-865.
- Orfila-Sintes, F. & Mattsson, J. (2007), Innovation behaviour in the hotel industry. *Omega*
- Trott, P. (2005). *Innovation Management and New Development*, Practice Hall, Third Edition
- J. L. Christensen (1992), *The Role of Finance in Industrial Innovation*
- Denton, K.D.-“Gaining competitiveness through innovation”- *European Journal of innovation Management*, p. 82-85(1999).
- Sharma S. & Rai A. (2002), “ An assessment of the relationship between ISD leadership characteristic and IS innovation adoption in organizations” *σελ.* 392
- Reed J. and Moreno G.-“The Role of Large Banks in Financing Innovation”(1986).
- Mankiw, N.G., Romer, D., Weil, D.N., 1992. A contribution to the empirics of economic growth. *American Economic Review*, 107, 407-437
- Sami Mahroum (2007). Assessing human resources for science and technology: The 3Ds framework. *Science and Public Policy* 34 (7), 489-499.
- Engelbrecht, H.J., 2001. The role of human capital in economic growth: some empirical evidence on the “Lucas vs. Nelson-Phelps” controversy. Massey University Department of Applied and International Economics, discussion paper No. 01.02
- Krugman, P., (1994) “Fluctuations, Instability and Agglomeration”, NBER Working Papers 4616, National Bureau of Economic Research, Inc.
- Porter, M.E. (1990) *The Competitive advantage of nations*, New York: The Free Press.
- Porter, M.E. (2000) “Attitudes, Values, Beliefs and the Microeconomics of Prosperity”, in Harrison L.E., Huntington S.P. (Eds), *Culture Matters: How values shape human progress*, New York Basic books.

Scott, M.C. (2000). Re-inspiring the corporation. Chichester: John Wiley and Sons

Ottenbacher, M. (2007). Innovation Management in the hospitality Industry: different strategies for achieving success. Journal of Hospitality & Tourism Research. Vol.31, No.4, pp.451-45.4

European Investment fund.

(Eurostat, 2000): Page 46-47

ICAP

Internet sources

<http://www.politicaseinnovacion.com>

<http://europa.eu.int>

<http://el.wikipedia.org/wiki/Καινοτομία>.

<http://www.thessalianews.gr>

<http://el.wikipedia.org/wiki/Innovation>.